

FIGURE 1A

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CCCGTGCCCC TAAAGGCCGC CGAGAAAGCT AAGTCCAAAT GTGACGTCGG 50
AGGTCTCGAC ATGGTCGCCA ACCCTCCAAA TGCTACCCGC CGGCCACGC 100
AACGCGGGCT TTTATAAAGA TGGCGCGCGA GACAATAACA CTTACTCATC 150
CGCGTACGCG TTTATTATTG TCAATATTTG TGTGGTTATT ATTACTGCTA 200
CCGCCCTTGT TTCTGCAAGG CCCTCGCCGC GGCCCAAGGCC ACTATTCGG 250
CAGCGGCCGC CGACGCGGCG AGCGTCGCCG CTAACGTCGG CGCCGCGGGG 300
AGCGGGGTTT CTTCGACTTA AATAGACTCC CGAGAAAAAA TTTTGGCTGC 350
CGTTCGCCAT CATCCGAGTC GGAAACACAG TATGCGGCCG AGTTAGGTTT 400
TACTTTTAAA AACTTTACCG TGCTGTACGG CCAGGGCGTT CTCAGGCTCG 450
AAGGGGCAAG AGTTGTCCAG ACTGATGGGT GACTCAGAGA CAGCGTTGTC 500
TTGTCTCCGT TTACCAAAAA TATTTCCACT CCTCTCTCAA AATTTTTACC 550
TCCGGTTTCG GTAATTAGGA AAGTTTTTGG CGCAGGGAGG TTAAAGCTG 600
CCATGCATAT GTCAGCGGTA CCCAGCACCC ACAAATGGAA CTCTTTTTCG 650
GCATACGCGC CAGATGACAA ATGGTAAAC CCTGCGTCCA AGCCGCTCCA 700
CTCGGGACTT ACTCCAGGCG GGTCGCCCC CTCACCGAAC CGAATCACGG 750
GTCTGCACAT CCTGGGAAGG GAAAACAGCT CCCCAGAAAC TTCGTACAGA 800
GATGCCGGGC GCACGATTAC CGATAATGTA CTCGGACGAT CGTAACTCGC 850
CATAGTTTTT ACTGCGTGAA CCAATTCTTT CCATCCAGAA TCCGAGAGCT 900
CAAATCTAGA ATTAGGTAGT TTGTAGTGCG AATCGACCGC AGAAACTATA 950
GTCACTTTTA CAGGCGCCAT CGCCGCTCAG ACTCCACCCC GCTATGATGT 1000
CAGAAATATA ACGCTCTTAT TCTAGCAGAG TCAGGCCAAT ATATACAGCT 1050
TAGAGAAGAT GCGGTTTCGG CGCATCTGTT CACGCTCTAG GGCAGAAAAA 1100
CGAAGAAGAA CAACCGAGAA TCCGCTTACC TCAAAACGCG TTTGCGTATT 1150
GGATAGTTTC TCACGGACAA TGTCATTGCG CCCCTATGCA GAAATTTTGC 1200
CGACCGCGGA AGGCGTCGAG CGCCTCGCCG AACTTGTTAG TGTGACAATG 1250
ACAGAACGCG CGGAACCTGT GACAGAGAAT ACAGCTGTAA ACAGTATCCC 1300
CCCGGCTAAC GAGAACGGGC AGAACTTCGC ATATGCAGGC GATGGGCCCT 1350
CGACTACTGA AAAAGTTGAC GGCTCGCATA CAGACTTCGA TGAAGCATCG 1400
AGCGACTACG CCGGCCCTGT CCCGCTCGCG CAAACTAGAT TGAAGCATT 1450
GGATGAATTT CTTACGCACT TCCGAGTTT AGACGATTTG GTGGAGGGGG 1500
CTTACGGGT TATCTGCGGC GTCCGTCGCT ACACCGAGGA AGAGCAACGT 1550
CGAAGAGGGG TTAACAGTAC TAACCAGGGG AAATCAAAAT GTAAGCGCCT 1600
GATAGCTAAA TATGTGAAAA ATGGAACAAG GGCGGCCTCT CAGCTGGAAA 1650
ATGAAATTTT GGTTCCTCGG CGCCTAAATC ACGAGAATGT TCTCAAGATC 1700
CAGGAAATCC TTCGGTACCC GGATAATACG TACATGTAA CGCAGAGGTA 1750

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FIGURE 1B

TCAGTTCGAC	TTGTACAGCT	ACATGTACGA	TGAAGCGTTC	GA CTGGAAAG	1800
ACAGTCCAAT	GCTTAAACAG	ACTAGACGCA	TCATGAAGCA	GCTCATGTCA	1850
GCGGTCTCGT	ATATCCATTC	AAAGAAACTG	ATTACACAGG	ACATCAAAC	1900
CGAAAATATT	TTCTTAAACT	GCGACGGCAA	GACAGTGCTG	GGCGACTTTG	1950
GAACTGTCAC	GCCTTTTGAA	AATGAGCGGG	AGCCCTTCGA	ATATGGATGG	2000
GTGGGGACCG	TGGCTACTAA	CTCTCCCGAG	ATACTCGCCA	GGGATTCTGA	2050
CTGTGAAATT	ACAGACATTT	GGAGCTGCGG	AGTAGTATTG	CTGGAAATGG	2100
TAAGCCATGA	ATTTTGCCCG	ATCGGCGATG	GCGGGGGAAA	TCCGCACCAG	2150
CAATTGCTGA	AAGTTATCGA	CTCTCTCTCA	GTTTGTGATG	AAGAGTTCCC	2200
AGACCCCCCG	TGTAATCTGT	ACAATTATTT	GCATTATGCG	AGCATCGATC	2250
GCGCCGGACA	TACGTGCCCG	TCGCTCATAC	GGAACCTCCA	CCTTCCGGCG	2300
GATGTGGAAT	ACCCTCTAGT	TAAAATGCTT	ACTTTTGACT	GGCGTTTGAG	2350
ACCCAGCGCG	GCCGAAGTAT	TGGCAATGCC	ACTGTTTTCG	GCTGAAGAGG	2400
AACGGACCAT	AACAATTATT	CATGGAAAAC	ATAAACCCAT	CCGACCCGAA	2450
ATCCGTGCGC	GGGTGCCACG	GTCCATGAGT	GAAGGTTAAT	AATAAAGGAC	2500
GGAGATAGAG	AACTGAAGCG	TCAGATTTTT	TTAAAAAAAT	AAATGATCGA	2550
GAACTTATGA	TTTGTCTTTC	TTGAATGACC	TTGCCCCATC	GATTAACGAA	2600
AAGACCTTTC	GCGCGTCGAT	TCTGCTCGGT	CTTTGTGATA	CATTATAGTG	2650
AGACTAAACT	CGACCGATAT	AACAAGACAA	TGTTACTCTA	TAGACCGGAC	2700
TCAACCATGC	GGCATAGCGG	AGGCGACGCA	AATCACAGAG	GGATAAGGCC	2750
GAGGCGGAAA	TCTATTGGAG	CGTTTAGCGC	GCGCGAAAAG	ACTGGAAAAC	2800
GAAATGCGCT	GACGGAAAGC	AGCTCCTCCT	CCGACATGCT	AGATCCGTTT	2850
TCCACGGATA	AGGAATTTGG	CGGTAAGTGG	ACGGTAGACG	GACCTGCCGA	2900
CATTACTGCC	GAGGTCCTTT	CTCAGGCATG	GGACGTTCTC	CAATTAGTGA	2950
AGCATGAAGA	TGCGGAGGAG	GAGAGAGTGA	CTTATGAGTC	CAAACCGACC	3000
CCGATACAGC	CGTTCAATGC	CTGGCCGGAC	GGGCCGAGTT	GGAACGCGCA	3050
GGATTTTACT	CGAGCGCCAA	TAGTTTATCC	CTCTGCGGAG	GTATTGGACG	3100
CAGAGGCGTT	GAAAGTAGGG	GCATTTCGTTA	GCCGAGTTTT	ACAATGTGTA	3150
CCGTTACGCG	GATCAAAGAA	AAGCGTTACG	GTGCGGGATG	CGCAGTCGTT	3200
TTTGGGGGAC	TCGTTCTGGA	GAATAATGCA	GAACGTTTAC	ACGGTTTGCT	3250
TACGACAGCA	CATAACTCGA	CTCAGGCACC	CTTCCAGCAA	AAGCATTGTT	3300
AACTGCAACG	ACCCTCTATG	GTACGCCTAC	GCGAATCAAT	TTCACTGGAG	3350
AGGAATGCGC	GTGCCGTGCG	TTAAATTAGC	CTCTCCCCCG	GAGGAGAATA	3400
TTCAACACGG	CCCAATGGCC	GCCGTTTTTA	GAAACGCGGG	GGCTGGTCTG	3450
TTCTGTGGC	CTGCCATGCG	CGCAGCCTTT	GAAGAGCGCG	ACAAGCGACT	3500

FIGURE 1C

GTTAAGAGCA TGCCTGTCTT CACTCGATAT CATGGACGCA GCCGTCCTCG 3550
 CGTCGTTTCC ATTTTACTGG CGCGGCGTCC AAGACACCTC GCGCTTCGAG 3600
 CCTGCGCTGG GCTGTTTGTC AGAGTACTTT GCACTAGTGG TGTTACTGGC 3650
 CGAGACGGTC TTAGCGACCA TGTCGACCA CGCACTGGTA TTCATGAGGG 3700
 CGCTGGCAGA CGGCAATTTC GATGACTATG ACGAAACTAG ATATATAGAC 3750
 CCCGTAAAAA ACGAGTACCT GAACGGAGCC GAGGGTACTC TGTTACGGGG 3800
 CATAGTGGCC TCCAACACCG CTCTGGCGGT GGTTTGCGCA AACACCTATT 3850
 CGACGATAAG AAAACTCCCG TCCGTGGCAA CTAGCGCGTG CAATGTTGCC 3900
 TACAGGACCG AAACGCTGAA AGCGAGGCGC CCTGGCATGA GCGACATATA 3950
 CCGGATATTA CAAAAAGAGT TTTTCTTTTA CATTGCGTGG CTCCAGAGGG 4000
 TTGCAACACA CGCAAATTTC TGTTTAAACA TTCTGAAGAG AAGCGTGGAT 4050
 ACGGGCCCCC GCCATTTTGT TTCAGGGCCA GCTCGGAGAA GCGGCTGCAG 4100
 CAGTTAAATA AAATGCTCTG CCCCCTTCTC GTGCCGATTC AATATGAAGA 4150
 CTTTTCGAAG GCCATGGGGT CTGAGCTCAA GAGGGAAAAG TTAGAGACAT 4200
 TCGTTAAAGC TATTTCCAGC GACAGGGACC CGAGGGGGTC CTTAAGATTT 4250
 CTCATTTTCG ACCATGCAAG GGAAATTATT GCAGACGGAG TACGGTTTAA 4300
 GCCGGTGATA GACGAGCCGG TTCGGGCTTC AGTTGCGCTG AGTACCGCTG 4350
 CCGCTGGGAA AGTGAAAGCG CGACGCTTAA CCTCAGTTTC GCGCCCCGTA 4400
 CCGCCCGCAG GCGCCGTTTC CGCGCGCCGG AAATCGGAAA TATGATAAAA 4450
 ATGCTTGGA TTTGCGGGCG AAGAGGCGTG ATCTGAAGGG CTCCACAATG 4500
 ACGTAACTGA GCTACGCATC CCTATAAAGT GTACSCGCTG ACCGCTAGCC 4550
 CATAAGTGT TACAGGAGGG GAGAGAGACA ACTTCAGCTC GAAGTCTGAA 4600
 GAGACATCAT GAGCGGCTTC AGTAACATAG GATCGATTGC CACCGTTTCC 4650
 CTAGTATGCT CGCTTTTGTG CGCATCTGTA TTAGGGGCGC CGGTACTGGA 4700
 CGGGCTCGAG TCGAGCCCTT TCCGTTTCGG GGGCAAAATT ATAGCCCAGG 4750
 CGTGCAACCG CACCACGATT GAGGTGACGG TCCCGTGGAG CGACTACTCT 4800
 GGTCGCACCG AAGGAGTGTG AGTCGAGGTG AAATGGTTCT ACGGGAATAG 4850
 TAATCCCGAA AGCTTCGTGT TCGGGGTGGA TAGCGAAACG GGCAGTGGAC 4900
 ACGAGGACCT GTCTACGTGC TGGGCTCTAA TCCATAATCT GAACGCGTCT 4950
 GTGTGCAGGG CGTCTGACGC CGGGATACCT GATTTGACA AGCAGTGCAG 5000
 AAAAGTGCAG AGAAGACTGC GCTCCGGGGT GGAAGTTGGT AGTTACGTGT 5050
 CTGGCAATGG ATCCCTGGTG CTGTACCCAG GGATGTACGA TGCCGGCATC 5100
 TACGCCTACC AGCTCTCAGT GGGTGGGAAG GGATATACCG GGTCTGTTTA 5150
 TCTAGACGTC GGACCAAACC CCGGATGCCA CGACCAGTAT GGGTACACCT 5200
 ATTACAGCCT GGCCGACGAG GCGTCAGACT TATCATCTTA TGACGTAGCC 5250

FIGURE 1D

TCGCCCCGAAC	TCGACGGTCC	TATGGAGGAA	GATTATTCCA	ATTGTCTAGA	5300
CATGCCCCCG	CTACGCCCAT	GGACAACCGT	TTGTTCGCAT	GACGTGAGG	5350
AGCAGGAAAA	CGCCACGGAC	GAGCTTTACC	TATGGGACGA	GGAATGCGCC	5400
GGTCCGCTGG	ACGAGTACGT	CGACGAAAGG	TCAGAGACGA	TGCCCAGGAT	5450
GGTTGTCTTT	TCACCGCCCT	CTACGCTCCA	GCAGTAGCCA	CCCGAGAGTG	5500
TTTTTTGTGA	GCGCCCACGC	AACATACCTA	ACTGCTTCAT	TTCTGATCAA	5550
TTATTGCGTA	TTGAATAAAT	AAACAGTACA	AAAGCATCAG	GTGTGGTTTG	5600
CGTGTCTGTG	CTAAACCATG	GCGTGTGCGG	GTGAAACCGT	AAATTACGTG	5650
ATAATAAATA	GCATAGGAGT	TGGCGTGCGG	CGTATTTCGC	CGAGAGATGG	5700
GGACAATGTT	AGTGTTGCGC	CTTTTCCTAC	TTGCAGTAGC	GGACGCGGCG	5750
TTGCCGACCG	GCAGATTCTG	CCGAGTTTGG	AAGGTGCCTC	CGGGAGGAAC	5800
CATCCAAGAG	AACCTGGCGG	TGCTCGCGGA	ATCGCCGGTC	ACGGGACACG	5850
CGACATATCC	GCCGCCTGAA	GGCGCCGTCA	GCTTTCAGAT	TTTTGCGGAC	5900
ACCCCTACTT	TGCGCATTCT	CTACGGGCTT	ACGGAGGACG	AACTTGCACT	5950
GGAGCGCGGG	ACGTCCGCCT	CAGACGCGGA	CAACGTGACA	TTTTCGCTGT	6000
CATATCGCCC	GCGCCCAGAA	ATTCACGGAG	CATACTTCAC	CATAGGGGTA	6050
TTGCTACTG	GCCAGAGCAC	GGAAAGCAGC	TATTCGGTCA	TCAGTCGGGT	6100
CTTAGTTAAC	GCCTCTCTGG	AACGGTCCGT	GCGCCTGGAA	ACGCCGTGCG	6150
ATGAAAATTT	TTTGCAGAAC	GAGCCTACAT	GGGGCTCGAA	GCGTTGGTTA	6200
GGCCCCCCGT	CGCCTTATGT	GCGAGATAAC	GATGTCGCCG	TGTTGACAAA	6250
AGCGCAGTAC	ATTGGGGAGT	GCTACTCCAA	CTCGGCGGCC	CAGACGGGGC	6300
TCACGTCTCT	CAACATGACC	TTTTTCTATT	CGCCTAAAAG	AATAGTAAAC	6350
GTCACGTGGA	CAACCGGCGG	CCCCTCCCCC	TCGCGCATAA	CGGTATACTC	6400
GTCGCGGGAG	AACGGGCAGC	CCGTGTTGAG	GAACGTTTCT	GACGGGTTCT	6450
TGGTTAAGTA	CACTCCCGAC	ATTGACGGCC	GGGCCATGAT	AAACGTTATT	6500
GCCAATTATT	CGCCGGCGGA	CTCCGGCAGC	GTCCTCGCGT	TTACGGCCTT	6550
TAGGGAAGGA	AAACTCCCAT	CCGCGATTCA	ACTGCACCGG	ATAGATATGT	6600
CCGGGACTGA	GCCGCCGGGG	ACTGAAACGA	CCTTCGACTG	TCAAAAAATG	6650
ATAGAAACCC	CGTACCGAGC	GCTCGGGAGC	AATGTTCCCA	GGGACGACTC	6700
TATCCGTCCG	GGGGCCACTC	TGCCTCCGTT	CGATACCGCA	GCACCTGATT	6750
TCGATACAGG	TACTTCCCCG	ACCCCCACTA	CCGTGCCAGA	GCCAGCCATT	6800
ACTACACTCA	TACCGCGCAG	CACTAGCGAT	ATGGGATTCT	TCTCCACGGC	6850
ACGTGCTACC	GGATCAGAAA	CTTTTCGGT	ACCCGTCCAG	GAAACGGATA	6900
GAACTCTTTC	GACAACTCCT	CTTACCCTTC	CACTGACTCC	CGGTGAGTCA	6950
GAAAATACAC	TGTTTCCTAC	GACCGCGCCG	GGGATTCTTA	CCGAGACCCC	7000

FIGURE 1E

GAGCGCGGCA	CATGAAACTA	CACAGACCCA	GAGTGCAGAA	ACGGTGGTCT	7050
TCTACTCAGAG	TCCGAGTACC	GAGTCGGAAA	CCGCGCGGTC	CCAGAGTCAG	7100
GAACCGTGGT	ATTTTACTCA	GACTCCGAGT	ACTGAACAGG	CGGCTCTTAC	7150
TCAGACGCAG	ATCGCAGAAA	CGGAGGCGTT	GTTTACTCAG	ACTCCGAGTG	7200
CTGAACAGAT	GACTTTTACT	CAGACTCCGG	GTGCAGAAAC	CGAGGCACCT	7250
GCCCAGACCC	CGAGCACGAT	ACCCGAGATA	TTTACTCAGT	CTCGTAGCAC	7300
GCCCCCGAA	ACCGCTCGCG	CTCCGAGCGC	GGCGCCGGAG	GTTTTTACAC	7350
AGAGTTCGAG	TACGGTAACG	GAGGTGTTTA	CTCAGACCCC	GAGCACGGTA	7400
CCGAAAATA	CTCTGAGTTC	GAGTACTGAA	CCGGCGATT	TTACTCGGAC	7450
TCAGAGCGCG	GGAAGTGGG	CCTTTACTCA	GACTTCGAGT	GCCGAGCCGG	7500
ACACTATGCG	AACTCAGAGT	ACTGAAACAC	ACTTTTTTAC	TCAGGCCCCG	7550
AGTACGGTAC	CGAAAGCTAC	TCAGACTCCG	AGTACAGAGC	CGGAGGTGTT	7600
GACTCAGAGT	CCGAGTACCG	AACCTGTGCC	TTTCACCCGG	ACTCTGGGCG	7650
CAGAGCCGGA	AATTACTCAG	ACCCCGAGCG	CGGCACCGBA	GGTTTATACT	7700
CGGAGTTCGA	GTACGATGCC	AGAAACTGCA	CAGAGCACAC	CCCTGGCCTC	7750
GCAAAACCT	ACCAGTTCGG	GAACCGGGAC	GCATAATACT	GAACCGAGGA	7800
CTTATCCAGT	GCAAACGACA	CCACATACCC	AGAAACTCTA	CACAGAAAAT	7850
AAGACTTTAT	CGTTTCCTAC	TGTTGTTTCA	GAATTCCATG	AGATGTCGAC	7900
GGCAGAGTCG	CAGACGCCCC	TATTGGACGT	CAAAATTGTA	GAGGTGAAGT	7950
TTTCAAACGA	TGGCGAAGTA	ACGGCGACTT	GCGTTTCCAC	CGTCAAATCT	8000
CCCTATAGGG	TAGAAACTAA	TTGGAAAGTA	GACCTCGTAG	ATGTAATGGA	8050
TGAAATTTCT	GGGAACAGTC	CCGCCGGGGT	TTTTAACAGT	AATGAGAAAT	8100
GGCAGAAACA	GCTGTACTAC	AGAGTAACCG	ATGGAAGAAC	ATCGGTCCAG	8150
CTAATGTGCC	TGTCGTGCAC	GAGCCATTCT	CCGGAACCTT	ACTGTCTTTT	8200
CGACACGTCT	CTTATAGCGA	GGGAAAAAGA	TATCGCGCCA	GAGTTATACT	8250
TTACCTCTGA	TCCGCAAACG	GCATACTGCA	CAATAACTCT	GCCGTCCGGC	8300
GTTGTTCCGA	GATTCGAATG	GAGCCTTAAT	AATGTTTCAC	TGCCGGAATA	8350
TTTGACGGCC	ACGACCGTTG	TTTCGCATAC	CGCTGGCCAA	AGTACAGTGT	8400
GGAAGAGCAG	CGCGAGAGCA	GGCGAGGCGT	GGATTTCTGG	CCGGGGAGGC	8450
AATATATACG	AATGCACCGT	CCTCATCTCA	GACGGCACTC	GCGTTACTAC	8500
GCGAAAGGAG	AGGTGCTTAA	CAAACACATG	GATTGCGGTG	GAAAACGGTG	8550
CTGCTCAGGC	GCAGCTGTAT	TCACTCTTTT	CTGGACTTGT	GTCAGGATTA	8600
TGCGGGAGCA	TATCTGCTTT	GTACGCAACG	CTATGGACCG	CCATTTATTT	8650
TTGAGGAATG	CTTTTTGGAC	TATCGTACTG	CTTTCTTCCT	TCGCTAGCCA	8700
GAGCACCGCC	GCCGTCACGT	ACGACTACAT	TTTAGGCCGT	CGCGCGCTCG	8750

ACGCGCTAAC	CATACCGGCG	GTTGGCCCCT	ATAACAGATA	CCTCACTAGG	8800
GTATCAAGAG	GCTGCGACGT	TGTCGAGCTC	AACCCGATTT	CTAACGTGGA	8850
CGACATGATA	TCGGCGGCCA	AAGAAAAAGA	GAAGGGGGGC	CCTTTCGAGG	8900
CCTCCGTCGT	CTGGTTCTAC	GTGATTAAGG	GCGACGACGG	CGAGGACAAG	8950
TACTGTCCAA	TCTATAGAAA	AGAGTACAGG	GAATGTGGCG	ACGTACAAC	9000
GCTATCTGAA	TGCGCCGTTT	AATCTGCACA	GATGTGGGCA	GTGGACTATG	9050
TTCTAGCAC	CCTTGATCG	CGAAATGGCG	CGGGACTGAC	TATATTCTCC	9100
CCCACTGCTG	CGCTCTCTGG	CCAATACTTG	CTGACCCTGA	AAATCGGGAG	9150
ATTTGCGCAA	ACAGCTCTCG	TAACTCTAGA	AGTTAACGAT	CGCTGTTTAA	9200
AGATCGGGTC	GCAGCTTAAC	TTTTTACCGT	CGAAATGCTG	GACAACAGAA	9250
CAGTATCAGA	CTGGATTTC	AGGCGAACAC	CTTTATCCGA	TCGCAGACAC	9300
CAATACACGA	CACGCGGACG	ACGTATATCG	GGGATACGAA	GATATTCTGC	9350
AGCGCTGGAA	TAATTTGCTG	AGGAAAAAGA	ATCCTAGCGC	GCCAGACCTT	9400
CGTCCAGATA	GCGTCCCGCA	AGAAATTCCC	GCTGTAACCA	AGAAAGCGGA	9450
AGGGCGCACC	CCGGACGCAG	AAAGCAGCGA	AAAGAAGGCC	CCTCCAGAAG	9500
ACTCGGAGGA	CGACATGCAG	GCAGAGGCTT	CTGGAGAAAA	TCCTGCCGCC	9550
CTCCCCGAAG	ACGACGAAGT	CCCCGAGGAC	ACCGAGCACG	ATGATCCAAA	9600
CTCGGATCCT	GACTATTACA	ATGACATGCC	CGCCGTGATC	CCGGTGGAGG	9650
AGACTACTAA	AAGTTCTAAT	GCCGTCTCCA	TGCCCATATT	CGCGGCGTTC	9700
GTAGCCTGCG	CGGTGCGGCT	CGTGGGGCTA	CTGGTTTGGA	GCATCGTAAA	9750
ATGCGCGCGT	AGCTAATCGA	GCCTAGAATA	GGTGGTTTCT	TCCTACATGC	9800
CACGCCTCAC	GCTCATAATA	TAAATCACAT	GGAATAGCAT	ACCAATGCCT	9850
ATTCATTGGG	ACGTTGAAA	AGCATGGCAT	CGCTACTTGG	AACTCTGGCT	9900
CTCCTTGCCG	CGACGCTCGC	ACCTTTCGGC	GCGATGGGAA	TCGTGATCAC	9950
TGGAAATCAC	GTCTCCGCCA	GGATTGACGA	CGATCACATC	GTGATCGTCG	10000
CGCTCGCCC	CGAAGCTACA	ATTCAACTGC	AGCTATTTT	CATGCCTGGC	10050
CAGAGACCCC	ACAAACCCTA	CTCAGGAACC	GTCCGCGTCG	CGTTTCGGTC	10100
TGATATAACA	AACCACTGCT	ACCAGGAAC	TAGCGAGGAG	CGCTTTGAAA	10150
ATTGCACTCA	TCGATCGTCT	TCTGTTTTTG	TCGGCTGTAA	AGTGACCGAG	10200
TACACGTTCT	CCGCCTCGAA	CAGACTAACC	GGACCTCCAC	ACCCGTTTAA	10250
GCTCACTATA	CGAAATCCTC	GTCCGAACGA	CAGCGGGATG	TTCTACGTAA	10300
TTGTTGCGCT	AGACGACACC	AAAGAACCCA	TTGACGTCTT	CGCGATCCAA	10350
CTATCGGTGT	ATCAATTCGC	GAACACCGCC	GCGACTCGCG	GACTCTATTC	10400
CAAGGCTTCG	TGTCGCACCT	TCGGATTACC	TACCGTCCAA	CTTGAGGCCT	10450
ATCTCAGGAC	CGAGGAAAGT	TGGCGCAACT	GGCAAGCGTA	CGTTGCCACG	10500

FIGURE 1G

GAGGCCACGA CGACCAGCGC CGAGGCGACA ACCCCGACGC CCGTCACTGC 10550
AACCAGCGCC TCCGAACCTTG AAGCGGAACA CTTTACCTTT CCCTGGCTAG 10600
AAAATGGCGT GGATCATTAC GAACCGACAC CCGCAAACGA AAATTCAAAC 10650
GTTACTGTCC GTCTCGGGAC AATGAGCCCT ACGCTAATTG GGGTAACCGT 10700
GGCTGCCGTC GTGAGCGCAA CGATCGGCCT CGTCATTGTA ATTTCCATCG 10750
TCACCAGAAA CATGTGCACC CCGCACCGAA AATTAGACAC GGTCTCGCAA 10800
GACGACGAAG AACGTTCCCA AACTAGAAGG GAATCGCGAA AATTTGGACC 10850
CATGGTTGCG TGCGAAATAA ACAAGGGCGC TGACCAGGAT AGTGAACCTG 10900
TGGAAGTGGT TGCATTGTT AACCCGTCTG CGCTAAGCTC GCCCGACTCA 10950
ATAAAAATGT GATTAAGTCT GAATGTGGCT CTCCAATCAT TTCGATTCTC 11000
TAATCTCCCA ATCCTCTCAA AAGGGGCAGT ATCGGACACG GACTGGGAGG 11050
GGCGTACTAC ACGATAGTTA TATGGTACAG CAGAGGCCTC TGAACACTTA 11100
GGAGGAGAAT TCAGCCGGGG AGAGCCCCTG TTGAGTAGGC TTGGGAGCAT 11150
ATTGCAGGAT GAACATGTTA GTGATAGTTC TCGCCTCTTG TCTTGCGCGC 11200
CTAACTTTTG CGACGCGACA CGTCCTCTTT TTGGAAGGCA CTCAGGCTGT 11250
CCTCGGGGAA GATGATCCCA GAAACGTTCC GGAAGGGACT GTAATCAAAT 11300
GGACAAAAGT CCTGCGGAAC GCGTGCAAGA TGAAGGCGGC CGATGTCTGC 11350
TCTTCGCTA ACTATTGCTT TCATGATTTA ATTTACGACG GAGGAAAGAA 11400
AGACTGCCCC CCCGCGGGAC CCCTGTCTGC AAACCTGGTA ATTTTACTAA 11450
AGCGCGGCGA AAGCTTCGTC GTGCTGGGTT CTGGGCTACA CAACAGCAAT 11500
ATAACTAATA TCATGTGGAC AGAGTACGGA GGCCTGCTCT TTGATCCTGT 11550
AACTCGTTCG GACGAGGGAA TCTATTTTCG ACGGATCTCT CAGCCAGATC 11600
TGCCCATGGA AACTACATCG TACAACGTCA GCGTTCTTTC GCACGTAGAC 11650
GAGAAGGCTC CAGCACCGCA CGAGGTGGAG ATAGACACCA TCAAGCCGTC 11700
AGAGGCCAC GCGCACGTGG AATTACAAAT GCTGCCGTTT CATGAACTCA 11750
ACGACAACAG CCCACCTAT GTGACCCCTG TTCTTAGAGT CTTCCCACCG 11800
ACCGAGCACG TAAAATTTAA CGTTACGTAT TCGTGGTATG GGTTTGATGT 11850
CAAAGAGGAG TGCGAAGAAG TGAACTGTT CGAGCCGTGC GTATACCATC 11900
CTACAGACGG CAAATGTCAG TTTCCCGCAA CCAACCAGAG ATGCCTCATA 11950
GGATCTGTCT TGATGGCGGA ATTCTTGGGC GCGGCCTCTT TGCTGGATTG 12000
TTCCCGCGAT ACTCTAGAAG ACTGCCACGA AAATCGCGTG CCGAACCTAC 12050
GGTTCGATTC GCGACTCTCC GAGTCACGCG CAGGCCTGGT GATCAGTCCT 12100
CTTATAGCCA TCCCCAAAGT TTTGATTATA GTCGTTTCCG ACGGAGACAT 12150
TTTGGGATGG AGCTACACGG TGCTCGGGAA ACGTAACAGT CCGCGCGTAG 12200
TAGTCGAAAC GCACATGCCC TCGAAGGTCC CGATGAACAA AGTAGTAATT 12250

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FIGURE 1H

GGCAGTCCCG GACCAATGGA CGAAACGGGT AACTATAAAA TGTACTTCGT 12300
CGTCGCGGGG GTGGCCGCGA CGTGCGTAAT TCTTACATGC GCTCTGCTTG 12350
TGGGGAAAAA GAAGTGCCCC GCGCACCAAA TGGGTACTTT TTCCAAGACC 12400
GAACCATTGT ACGCGCCGCT CCCCAAAAAC GAGTTTGAGG CCGGCGGGCT 12450
TACGGACGAT GAGGAAGTGA TTTATGACGA AGTATACGAA CCCCTATTTT 12500
GCGGCTACTG TAAGCAGGAA TTCCGCGAAG ATGTGAATAC CTTTTTCGGT 12550
GCGGTCGTGG AGGGAGAAAG GGCCTTAAAC TTAAATCCG CCATCGCATC 12600
AATGGCAGAT CGCATCCTGG CAAATAAAAG CGGCAGAAGG AATATGGATA 12650
GCTATTAGTT GGTTCATGCT TTTAAGACCA GAGGGGCCGA AGACGCGGCC 12700
GCGGGCAAGA ACAGGTTTAA GAAATCGAGA AATCGGGAAA TCTTACCGAC 12750
CAGACTGCGT GGCACCGGTA AGAAAACTGC CGGATTGTCC AATTATACCC 12800
AGCCTATTCC CTGGAACCCT AAATTCTGCA GCGCGCGCGG GGAATCTGAC 12850
AACCACGCGT GTAAAGACAC TTTTATCGC AGGACGTGCT GCGCATCGCG 12900
CTCTACCGTT TCCAGTCAAC CCGATTCCCC CCACACACCC ATGCCTACTG 12950
AGTATGGGCG CGTGCCCTCC GCAAAGCGCA AAAAACTATC ATCTTCAGAC 13000
TSSGAGGGCG CGCACCAACC CCTAGTATCC TGTAAACTTC CGGATTCTCA 13050
AGCAGCACCG GCGCGAACCT ATAGTTCTGC GCAAAGATAT ACTGTTGACG 13100
AGGTTTCGTC GCCAACTCCG CCAGGCGTCG ACGCTGTTGC GGACTTAGAA 13150
ACGCGCGCGG AACTTCCTGG CGCTACGACG GAACAAACGG AAAGTAAAAA 13200
TAAGCTCCCC AACCAACAAT CGCGCCTGAA GCCGAAACCC ACAAACGAGC 13250
ACGTCGGAGG GGAGCGGTGC CCTCCGAAG GCACGGTCGA GGCGCCATCG 13300
CTCGGCATCC TCTCGCGCGT CGGGGCAGCG ATAGCAAACG AGCTGGCTCG 13350
TATGCGGAGG GCGTGTCTTC CGTCGCGCGC GTCGGCGGCC GCTGCCGGAA 13400
TAGTGGCCTG GGCCGCGGCG AGGGCCTTGC AGAAACAAGG GCGGTAGCAG 13450
TAATAATAAC CACACAAATA TTG 13473

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FIGURE 2

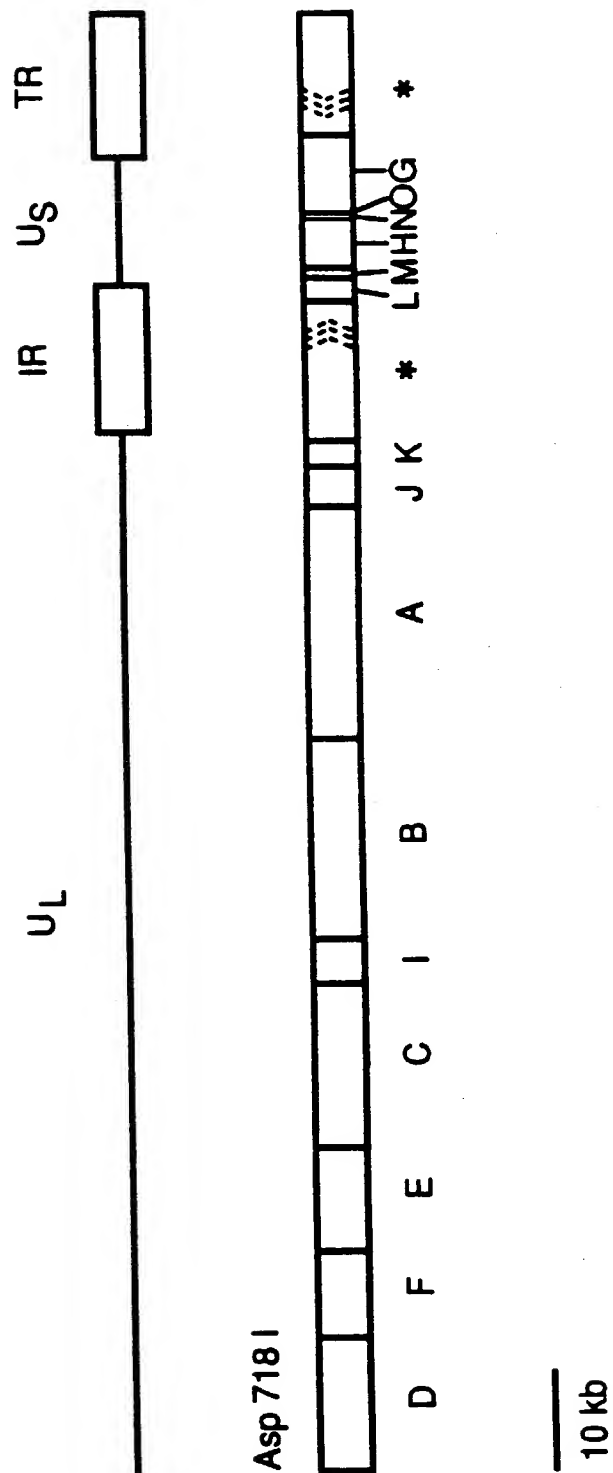


FIGURE 3

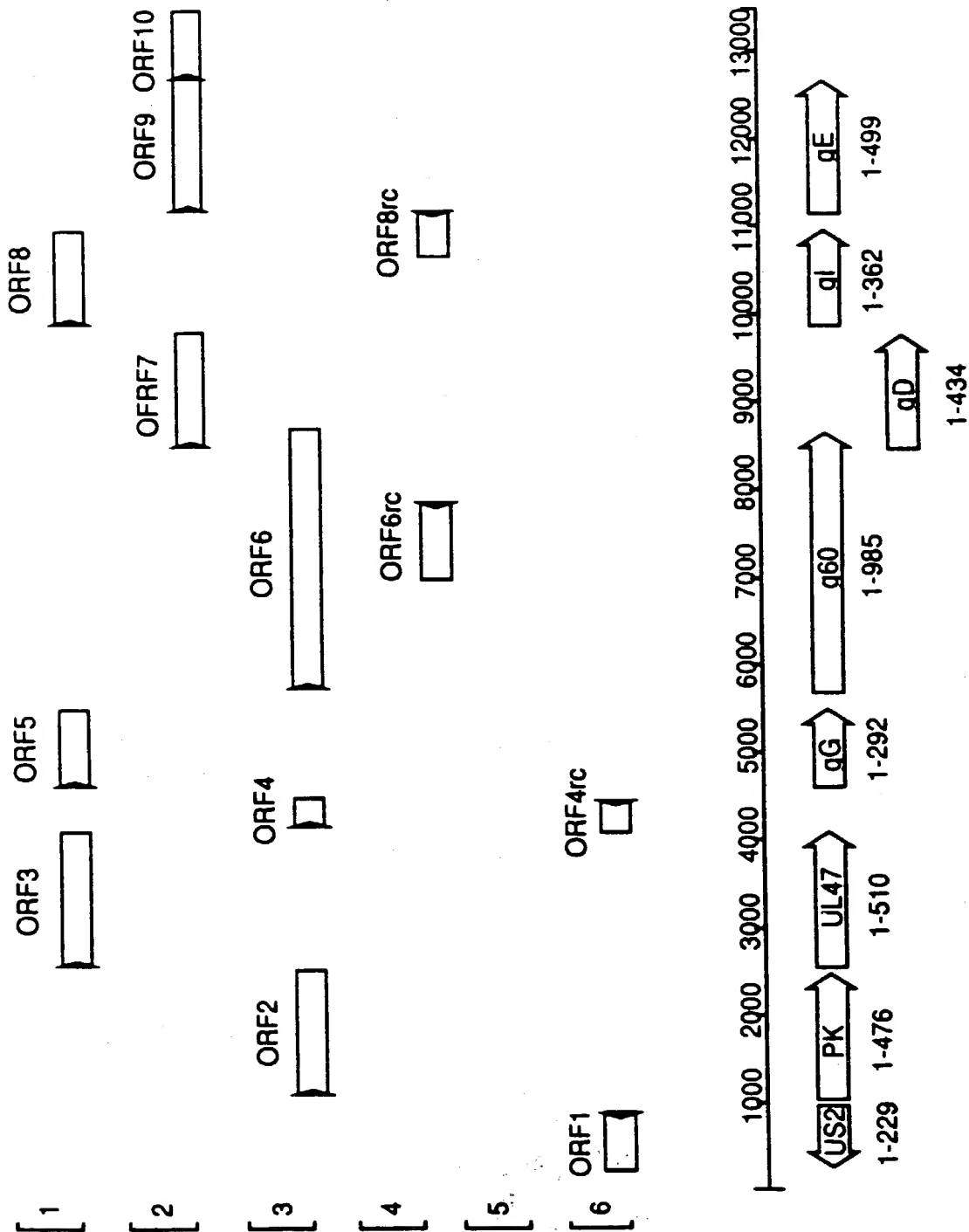


FIGURE 4A
FIGURE 4B

FIGURE 4A

DNA	Origin	Sites	Size
Vector	pUC 19	Asp718 I—Asp718 I	~2686 BP
Fragment 1	ILTV 5164 bp	Asp718 I—Nhe I	~2830 BP
Fragment 2	HCMV, E. coli, PRV	Sal I—Sal I	~5017 BP
Fragment 3	ILTV 5164 bp	Sal I—Asp718 I	~1709 BP

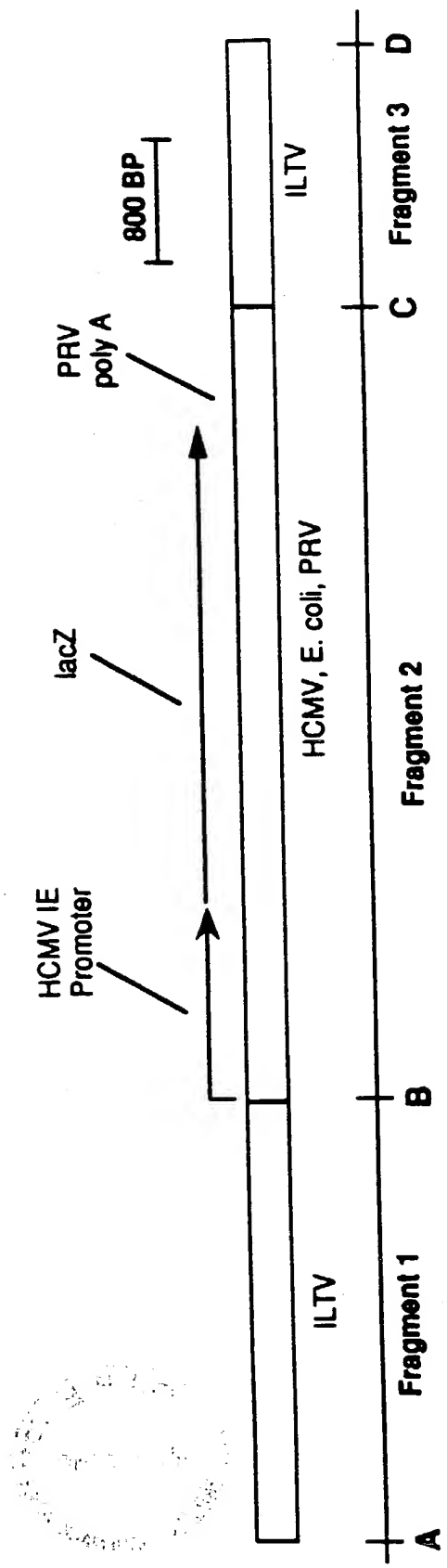


FIGURE 4B

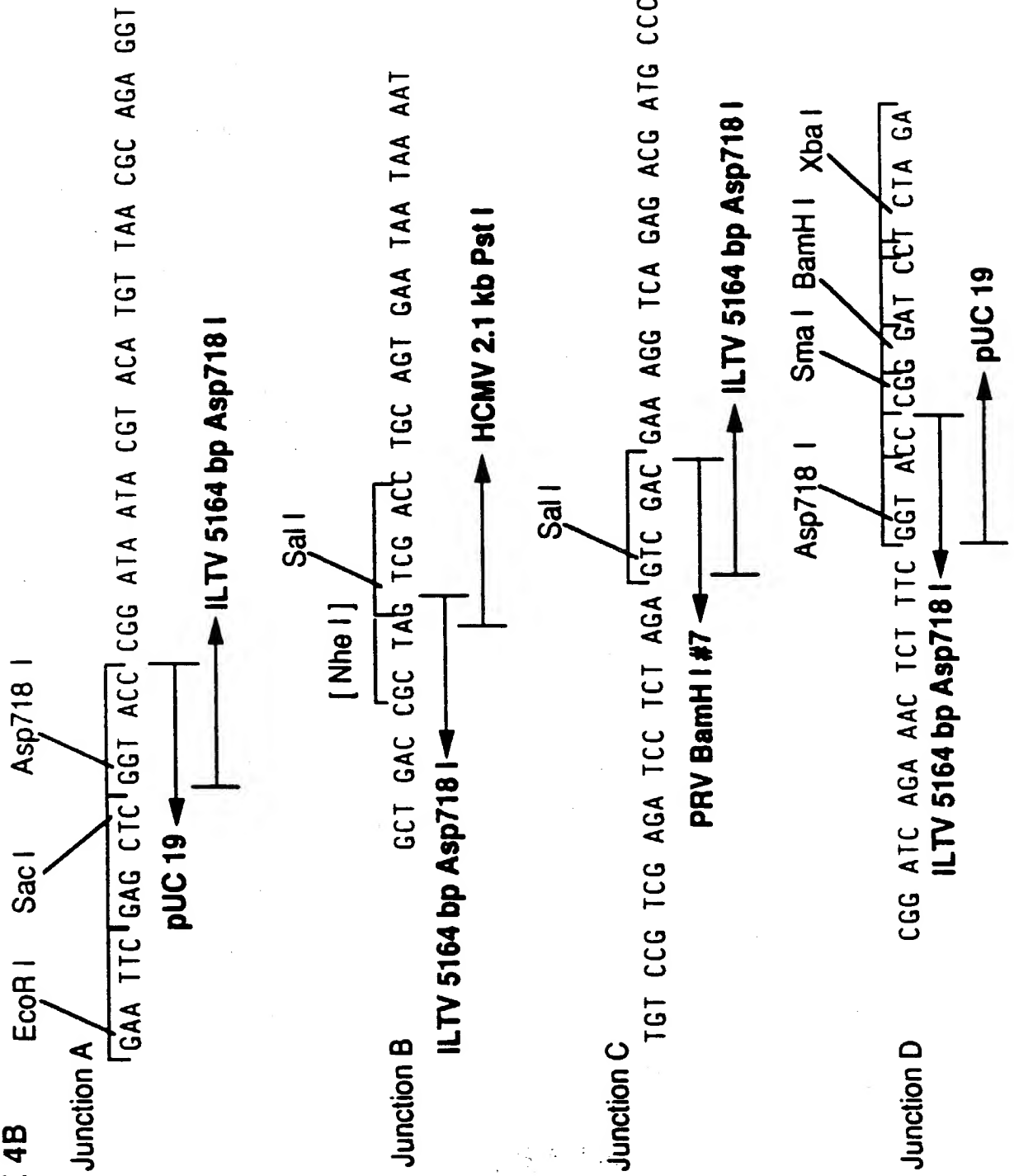


FIGURE 5A

DNA	Origin	Sites	Size
Vector	pSP 64/65	Hind III—Hind III	~3002 BP
Fragment 1	ILTV 2.4 kb Hind III	Hind III—Bcl I	~1087 BP
Fragment 2	PRV, E. coli, HCMV	Sal I—Sal I	~5017 BP
Fragment 3	ILTV 2.4 kb Hind III	Bcl I—Hind III	~700 BP

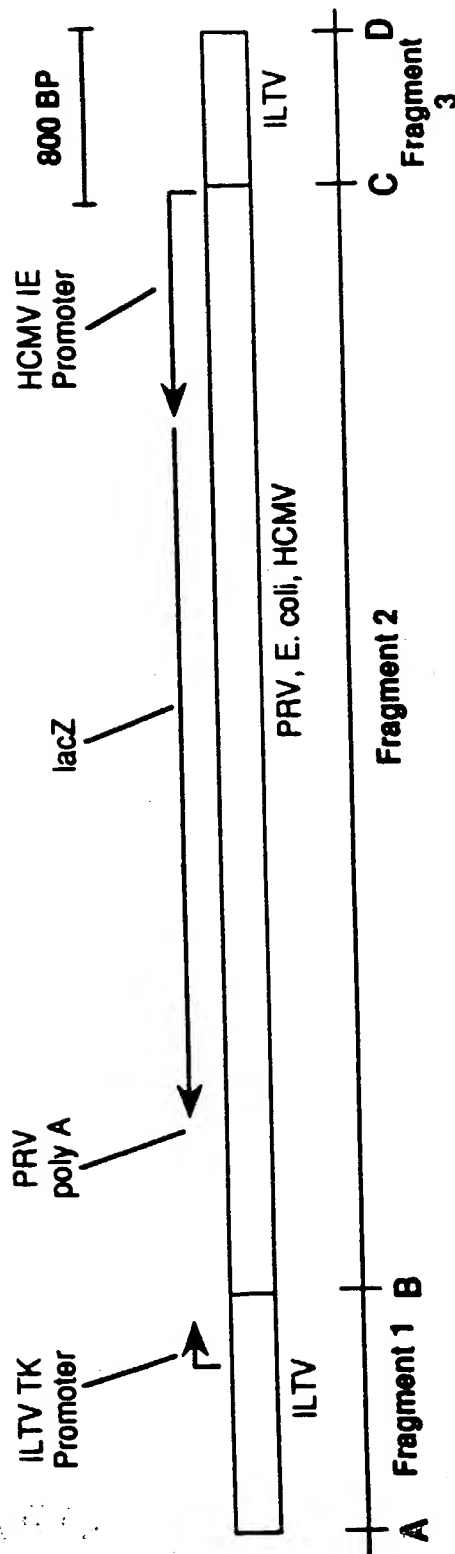


FIGURE 5B

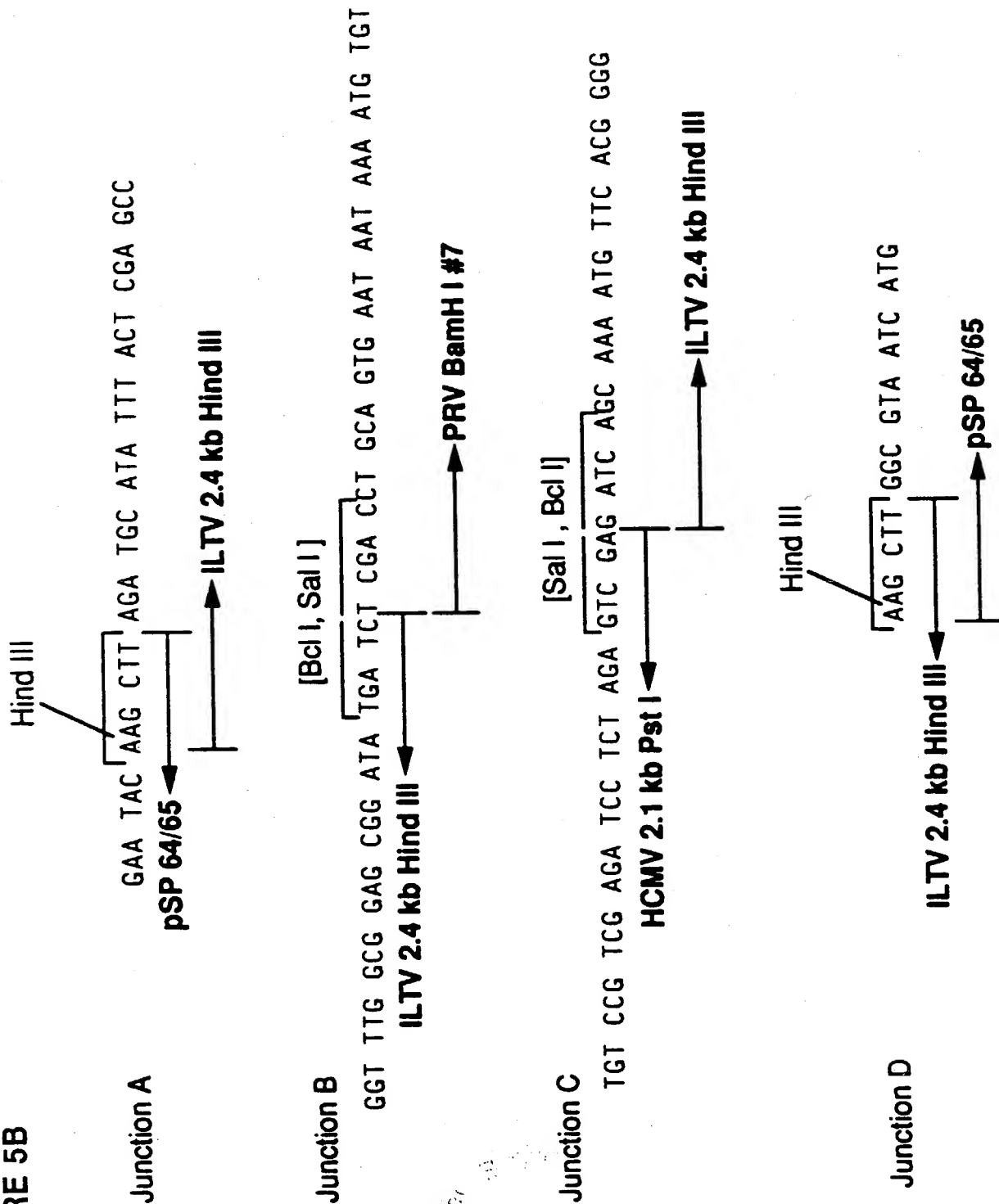


FIGURE 6A
FIGURE 6B

FIGURE 6A

DNA	Origin	Sites	Size
Vector	pSP 18/19	Asp718 I—Asp718 I	~2958 BP
Fragment 1	ILTV 2.5 kb	Asp718 I—Dra I	~2300 BP
Fragment 2	PRV, E. coli, HSV-1	Xba I—Xba I	~3039 BP
Fragment 3	ILTV 1097 bp	Asp718 I Xba I—Asp718 I	~ 809 BP

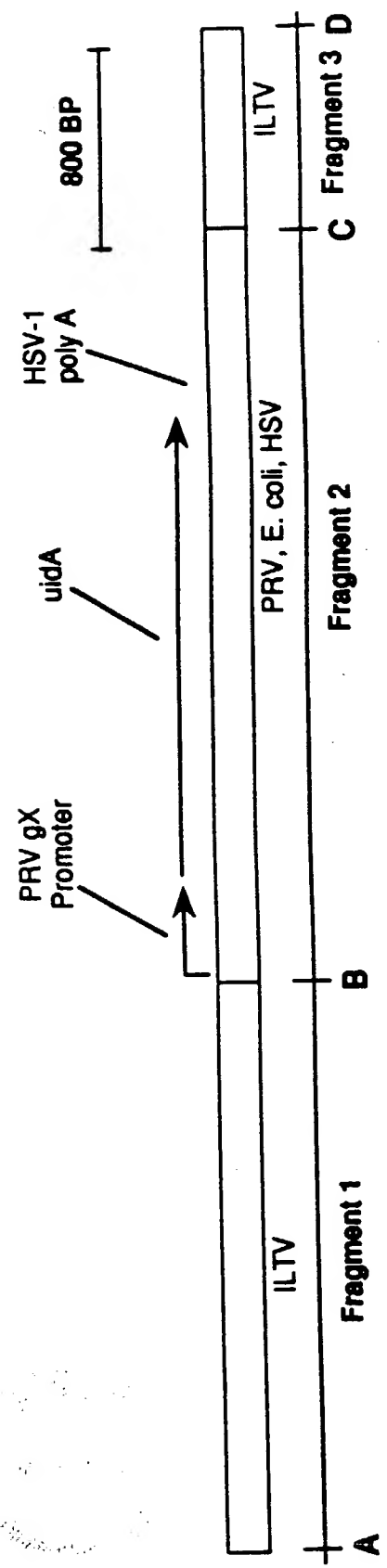


FIGURE 6B

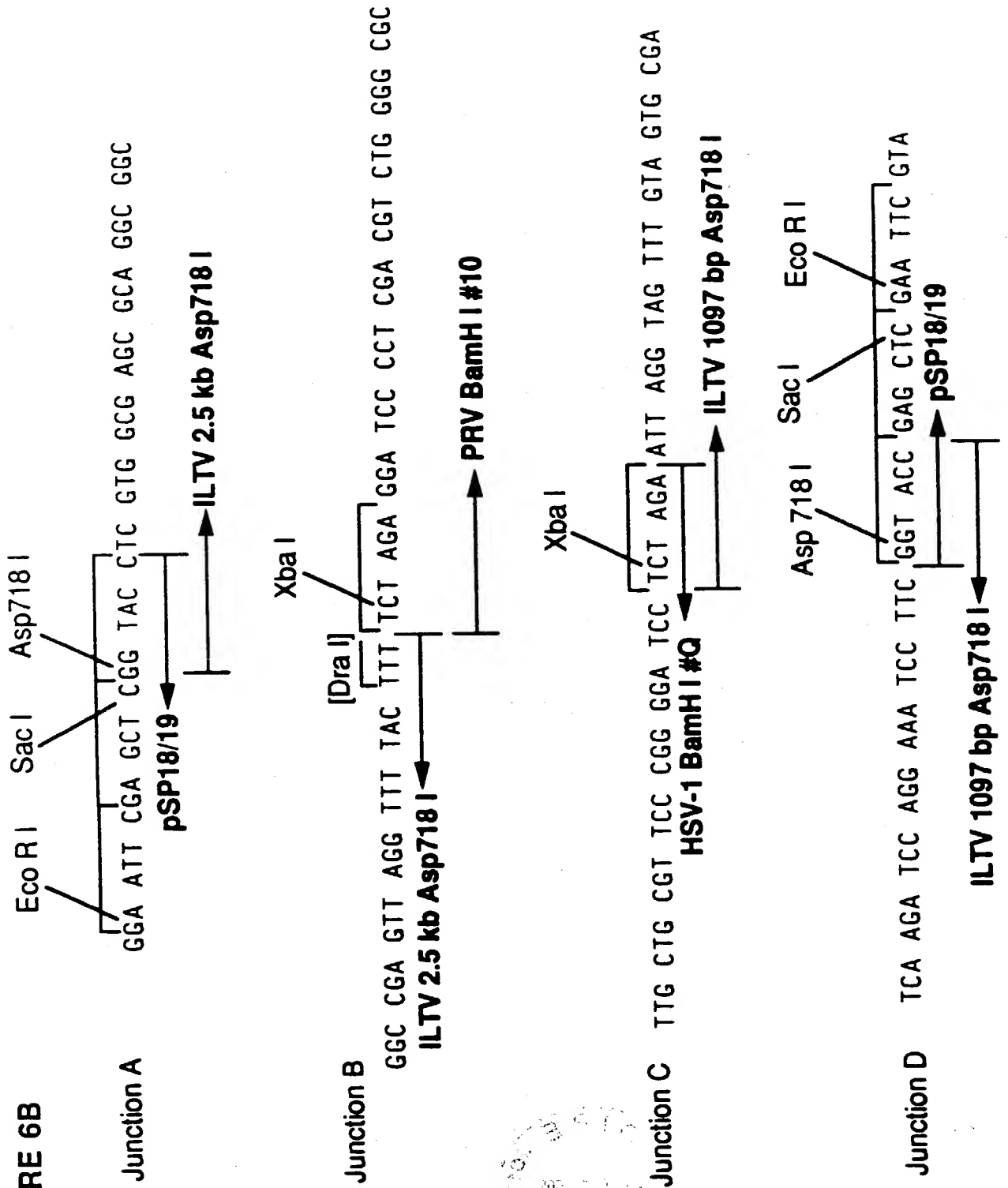


FIGURE 7A
FIGURE 7B
FIGURE 7C

FIGURE 7A

DNA	Origin	Sites	Size
Vector	pUC19	Asp718 I—Hind III	~2647 BP
Fragment 1	ILTV 8.0 kb Asp718 I	Asp718 I—Xba I	~1619 BP
Fragment 2	ILTV 8.0 kb Asp718 I	Xba I—Xho I†	~ 691 BP
Fragment 3	HSV-1, E. coli, PRV	Sal I—Sal I	~3051 BP
Fragment 4	ILTV 8.0 kb Asp718 I	Xho I†—Hind III	~ 624 BP
Fragment 5	ILTV 8.0 kb Asp718 I	Hind III—Hind III	~2700 BP

† Restriction enzyme site introduced by PCR cloning

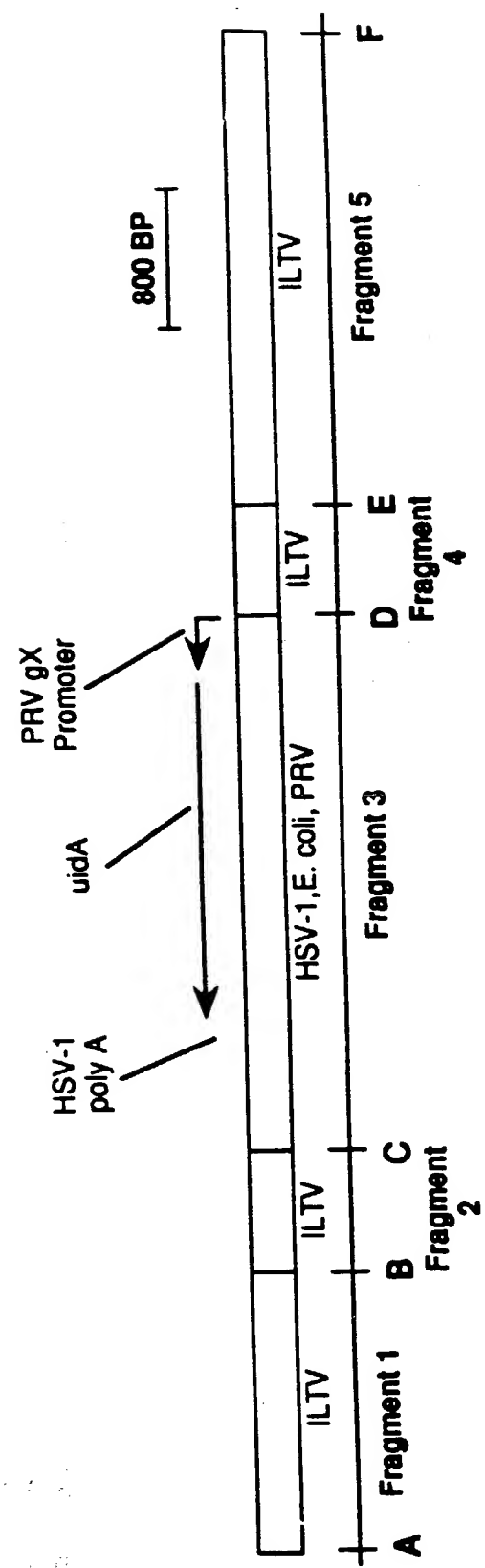
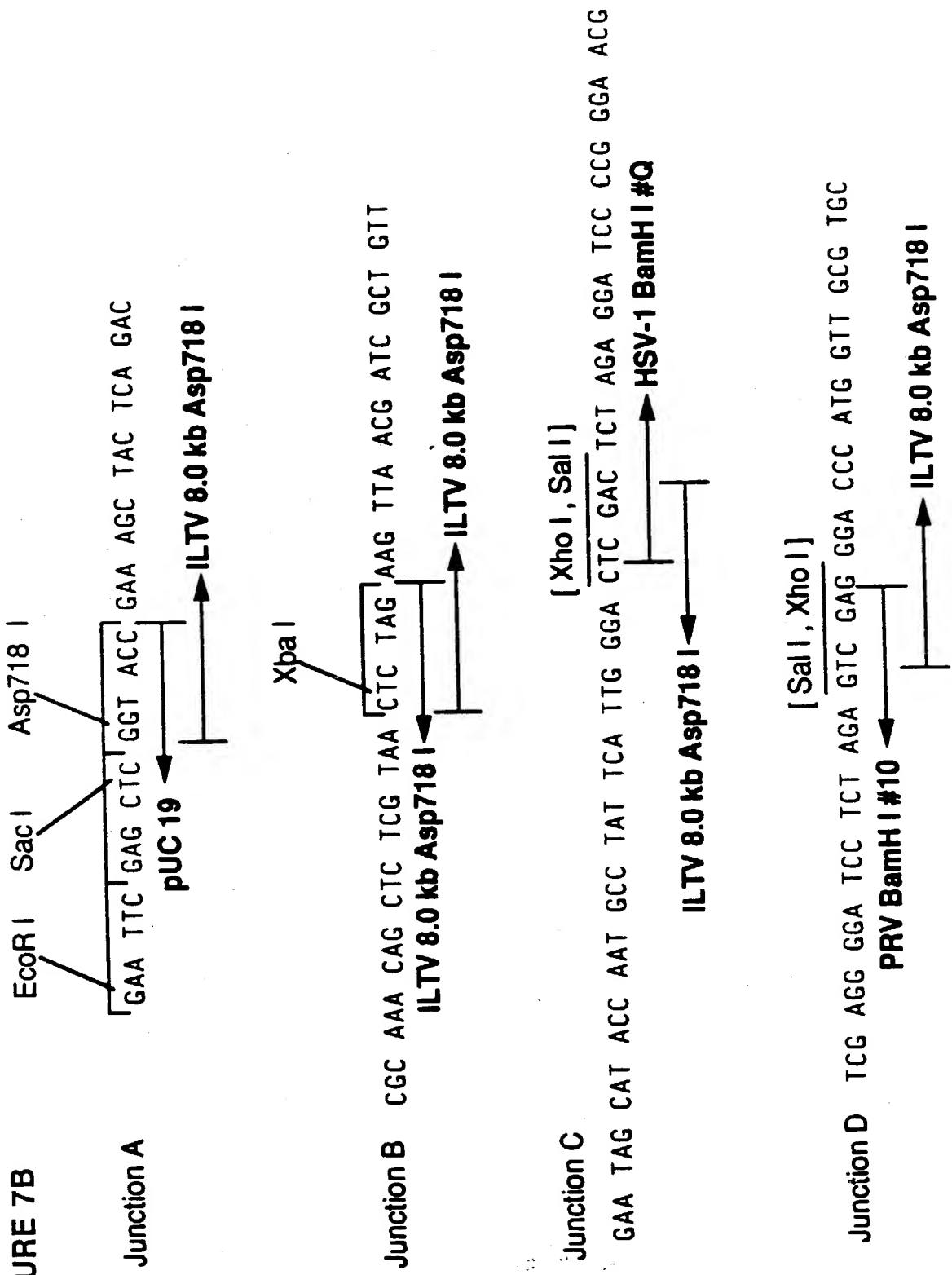


FIGURE 7B



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FIGURE 7C

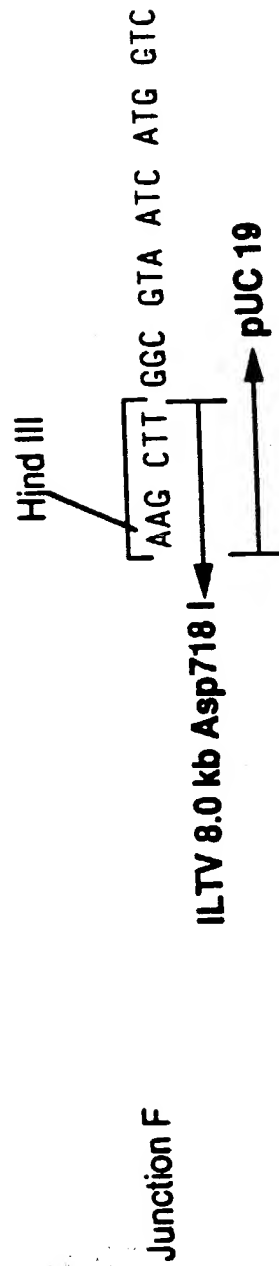
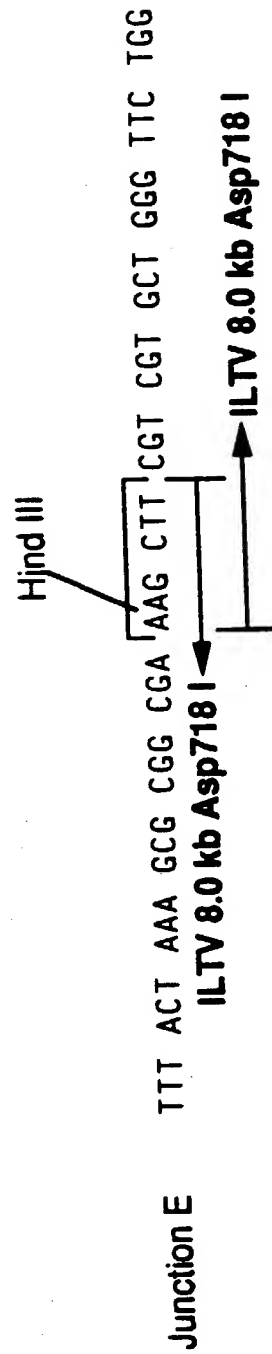


FIGURE 8A
FIGURE 8B
FIGURE 8C

FIGURE 8A

DNA	Origin	Sites	Size
Vector	pSP18/19	Asp718 I—Asp718 I	~2958 BP
Fragment 1	ILTV 5164 bp Asp718 I	Asp718 I—BssH II	~1066 BP
Fragment 2	ILTV 5164 bp Asp718 I	Sal I—Bcl I	~ 123 BP
Fragment 3	HSV-1, E. coli, PRV	BamH I—BamH I	~3027 BP
Fragment 4	ILTV 5164 bp Asp718 I	Bcl I—Asp718 I	~1334 BP

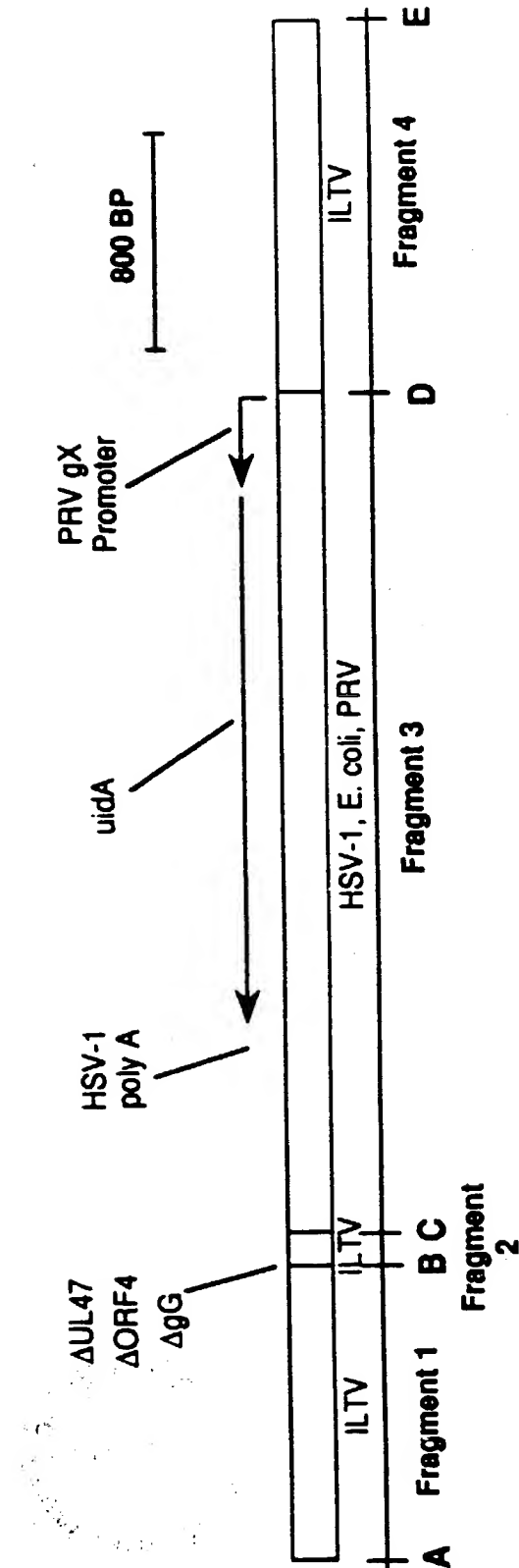


FIGURE 8B

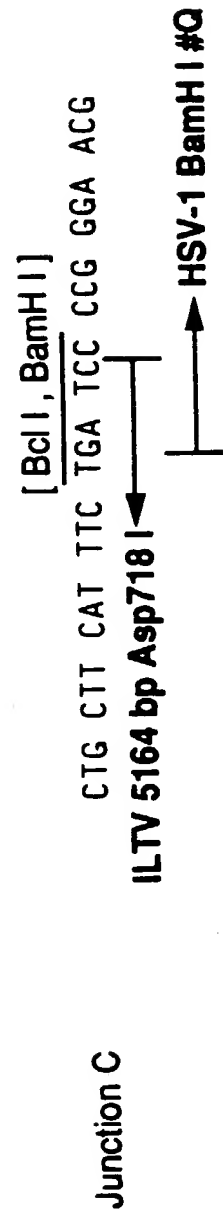
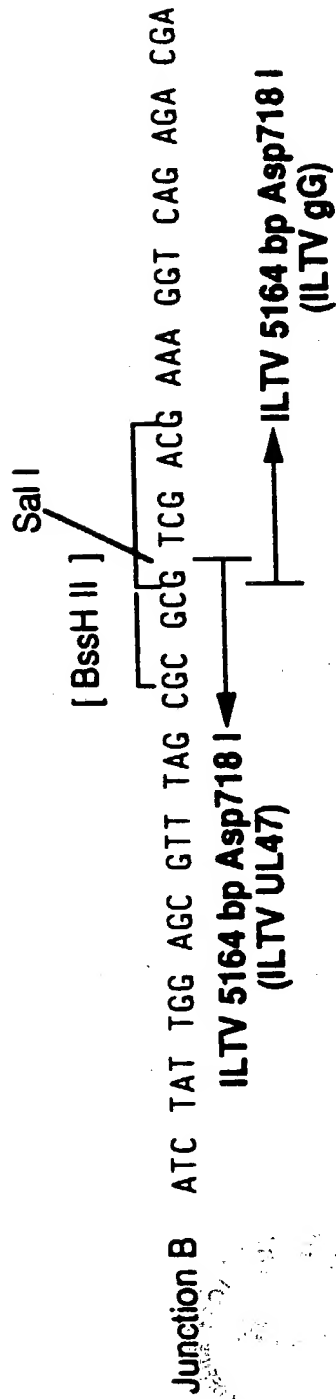
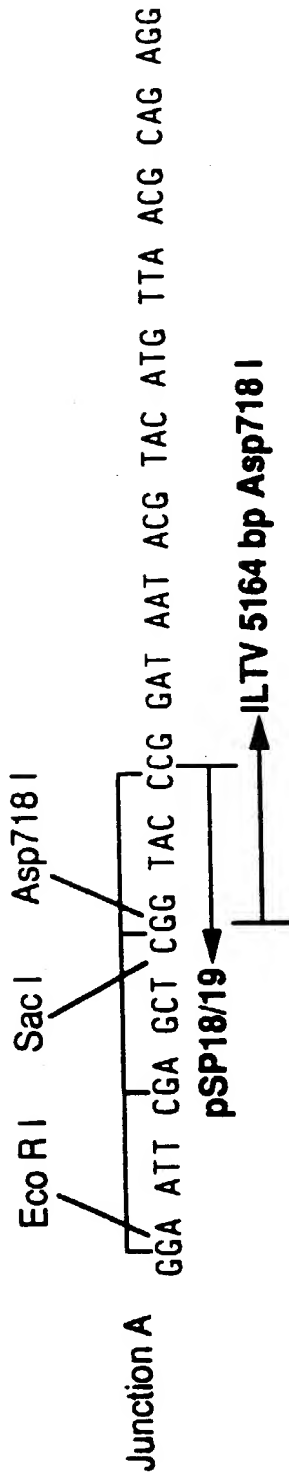


FIGURE 8C

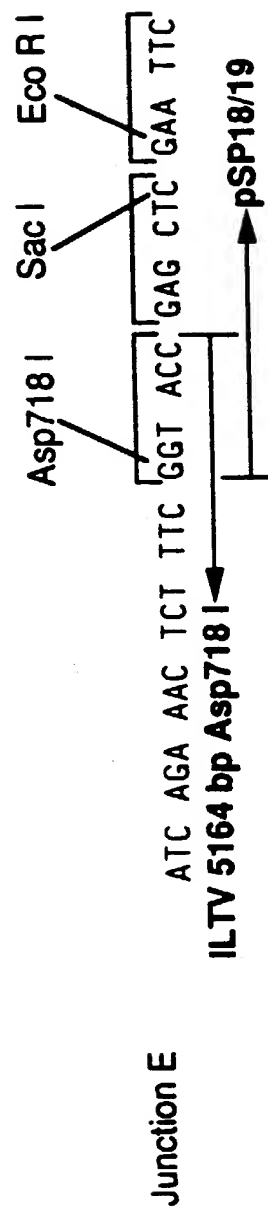
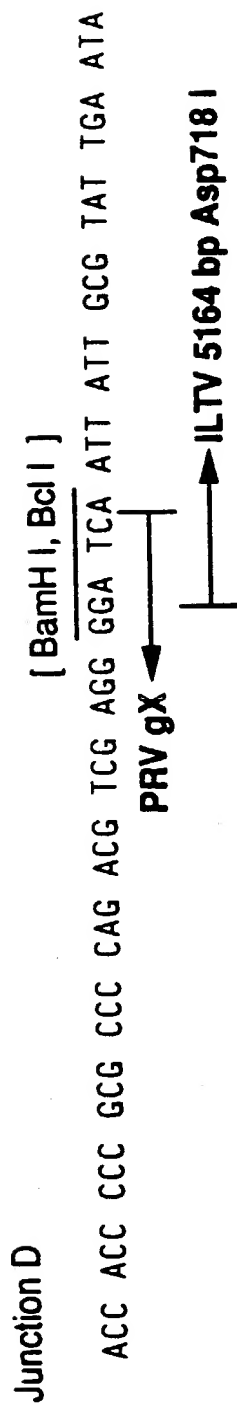
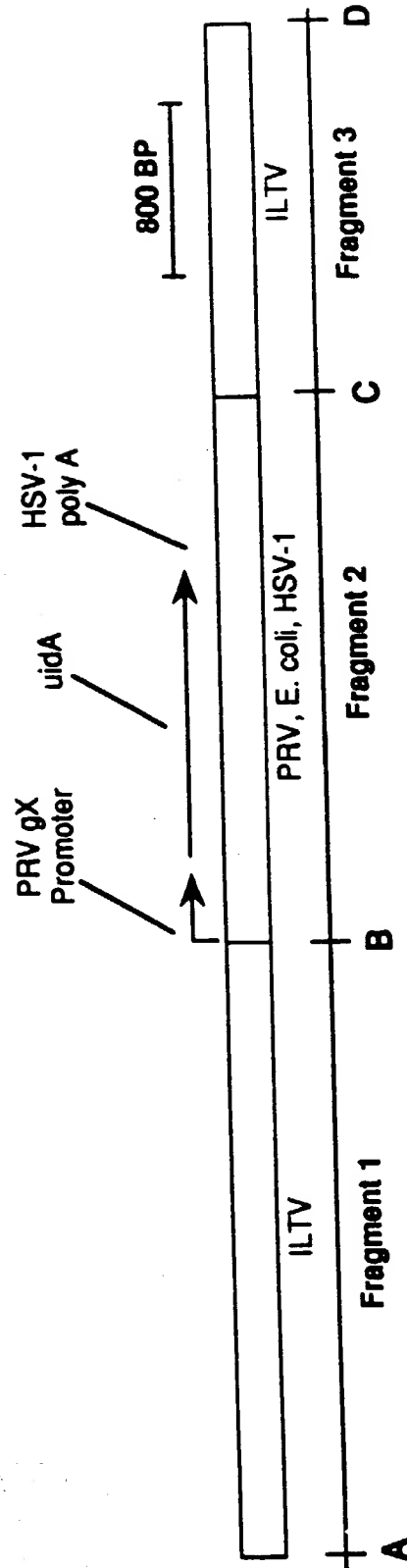


FIGURE 9A
FIGURE 9B

FIGURE 9A

DNA	Origin	Sites	Size
Vector	pUC19	Asp718 —BamH I	~2677 BP
Fragment 1	ILTV 5164 bp Asp718I	Asp718 —Nhe I	~2830 BP
Fragment 2	PRV, E. coli, HSV-1	Sal I—Sal I	~3051 BP
Fragment 3	ILTV 4545 bp BamH I	Sal I—BamH I	~1709 BP



RE 9B

Junction A

EcoRI SacI Asp718 I

GAA TTC GAG CTC GGT ACC CGG ATA ATA CGT ACA TGT TAA CGC AGA GGT

pUC 19

ILTV 5164 bp Asp718 I

Junction B

[NheI]

GCT GAC CGC TAG TCG ACT CTA GAG GAT CCC CTC

ILTV 5164 bp Asp718 I

PRV BamHI #10

Junction C

SalI

CGT TCC CGG GGA TCC TCT AGA GTC GAC GGC AGA GTC GCA GAC

HSV-1 BamHI #Q

ILTV 4545 bp BamHI

Junction D

BamHI

TGA TCC AAA CTC GGA TCC TCT AGA GTC GAC

ILTV 4545 bp BamHI

pUC 19

FIGURE 10A
FIGURE 10B

FIGURE 10A

DNA	Origin	Sites	Size
Vector	pSP 71	Xma I—Sma I	~3066 BP
Fragment 1	PRV BamH I #10	Sal I—EcoR I†	~ 422 BP
Fragment 2	pRAJ 260	EcoR I†—Xma I†	~1826 BP
Fragment 3	HSV-1 BamH I #Q	Xma I—Xma I	~ 784 BP

† Restriction enzyme site introduced by PCR cloning

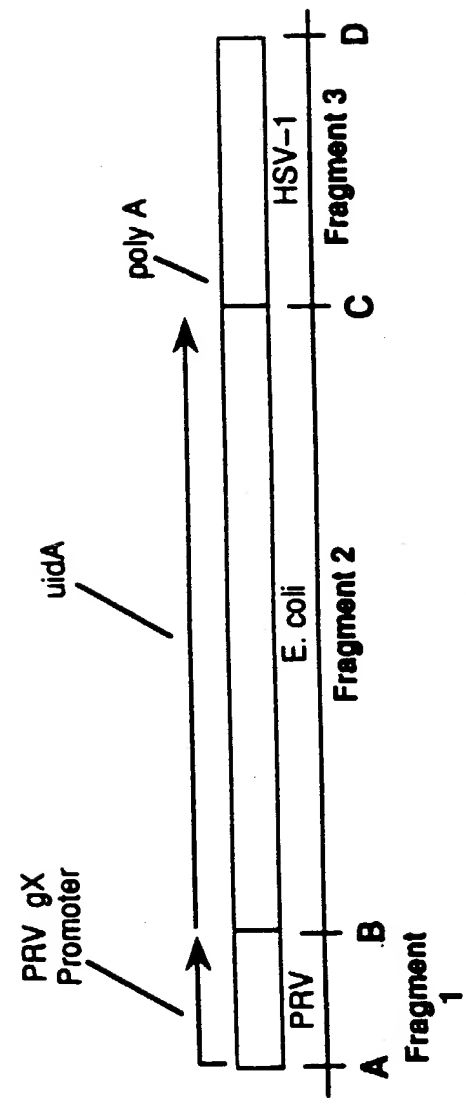


FIGURE 10B

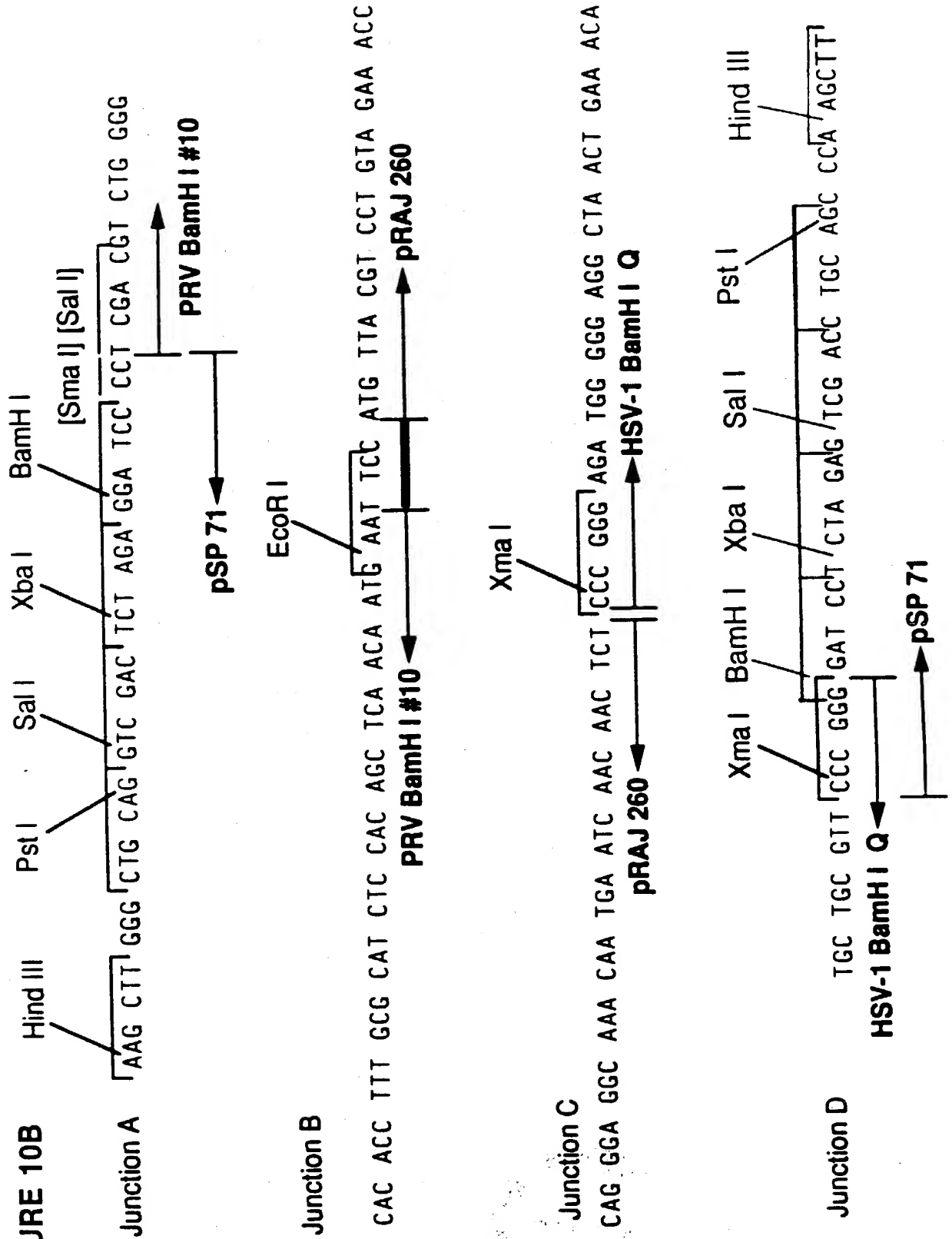


FIGURE 11A
FIGURE 11B
FIGURE 11C

FIGURE 11A

DNA	Origin	Sites	Size
Vector	pSP 72	Pst I—Pst I	~3076 BP
Fragment 1	HCMV 2.1 kb Pst I	Pst I—Ava II	~1154 BP
Fragment 2	pJF 751	BamH I—Pvu II	~3010 BP
Fragment 3	PRV BamH I #7	Nde I—Sal I	~ 750 BP

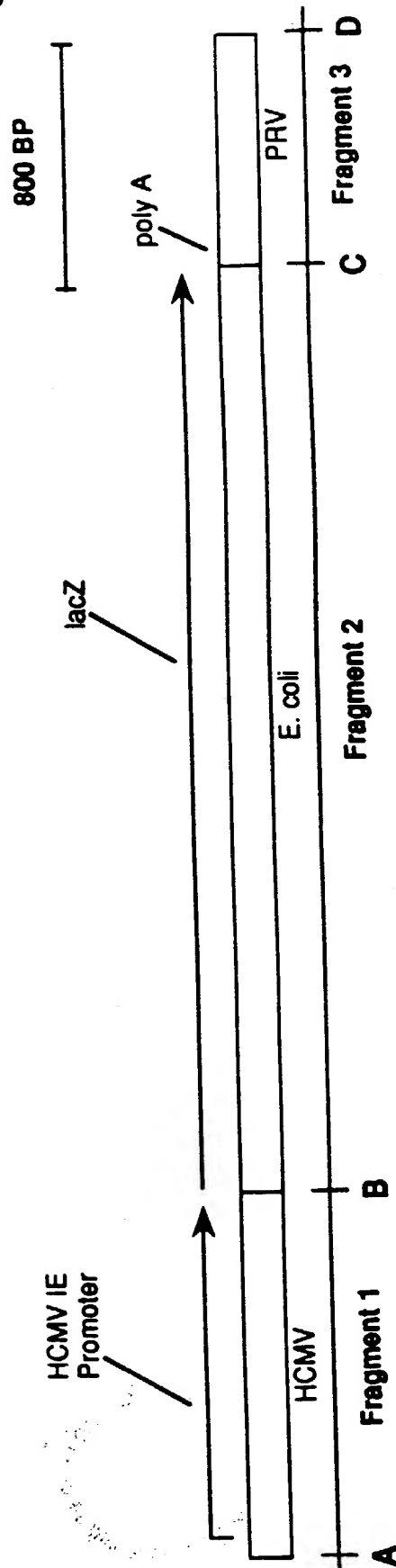


FIGURE 11B

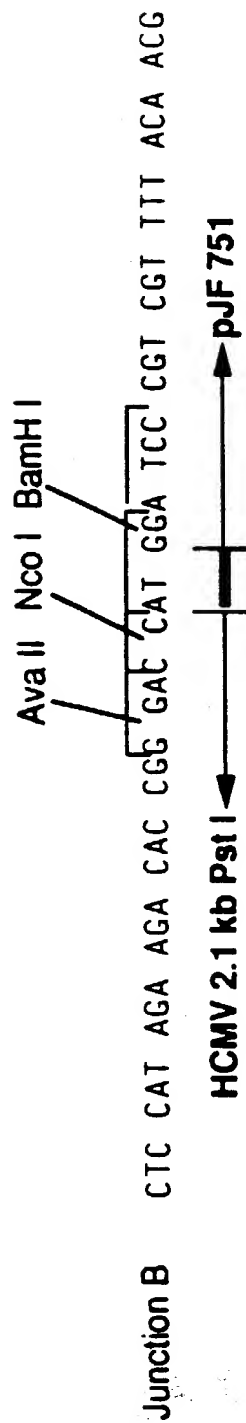
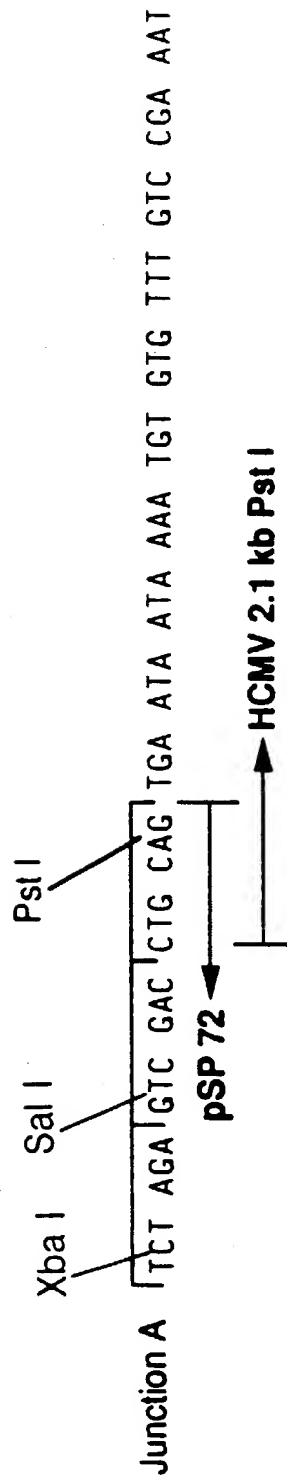


FIGURE 11C

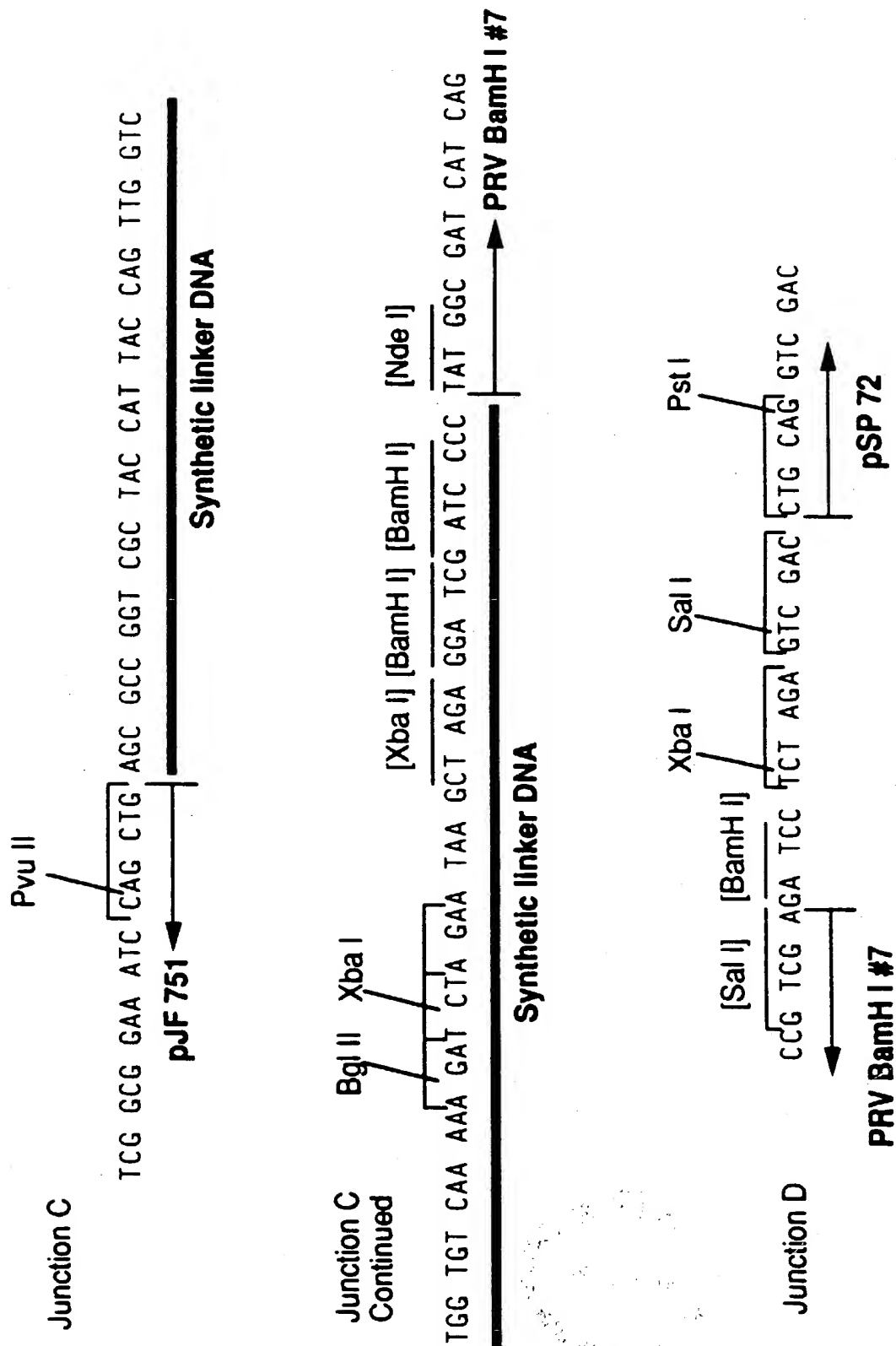


FIGURE 12

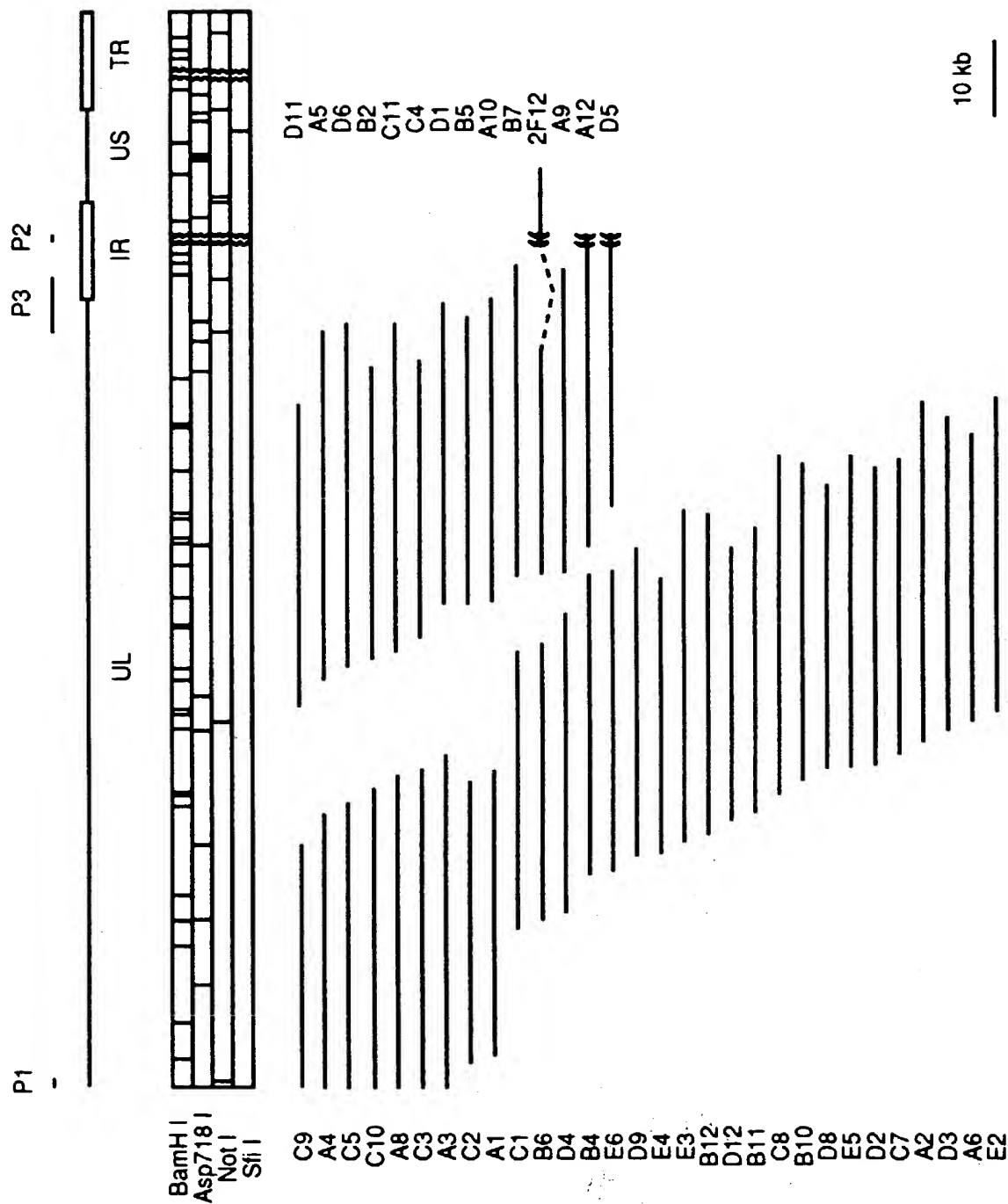
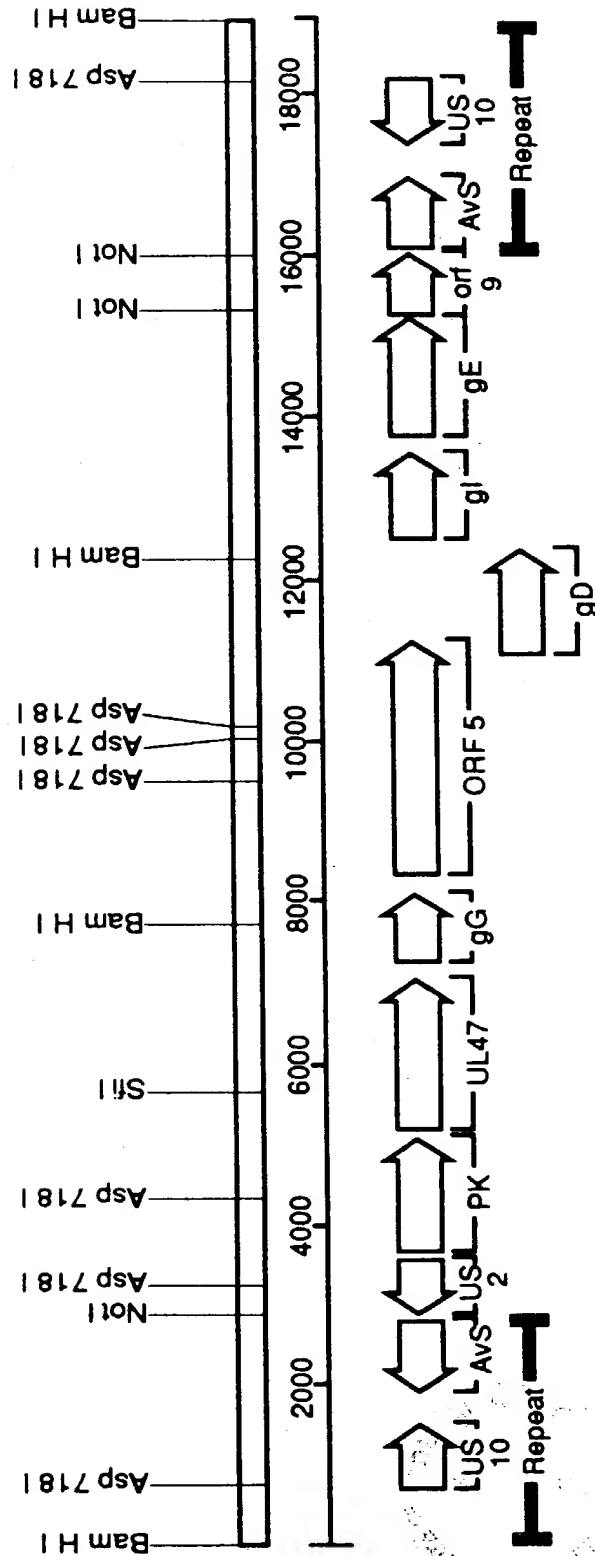


FIGURE 13



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FIGURE 14

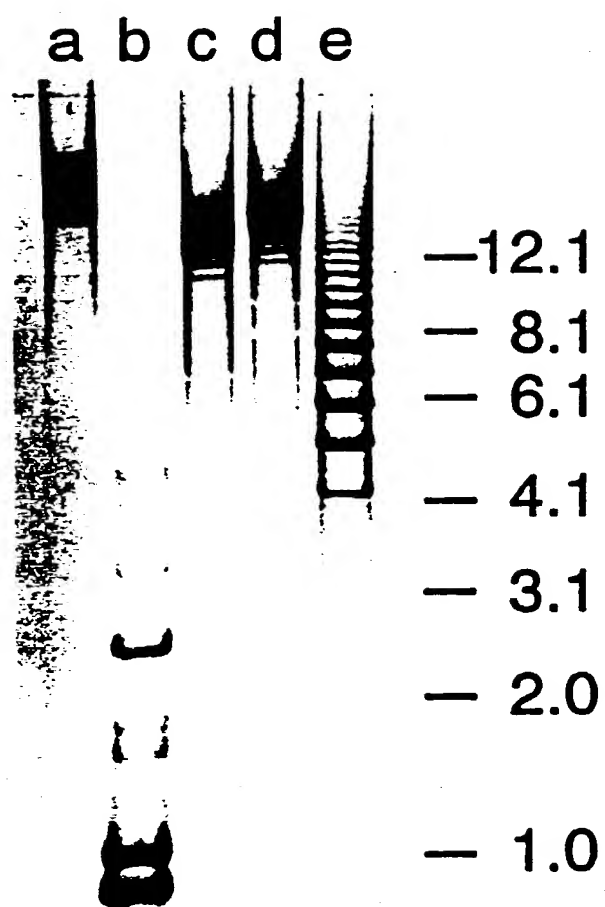
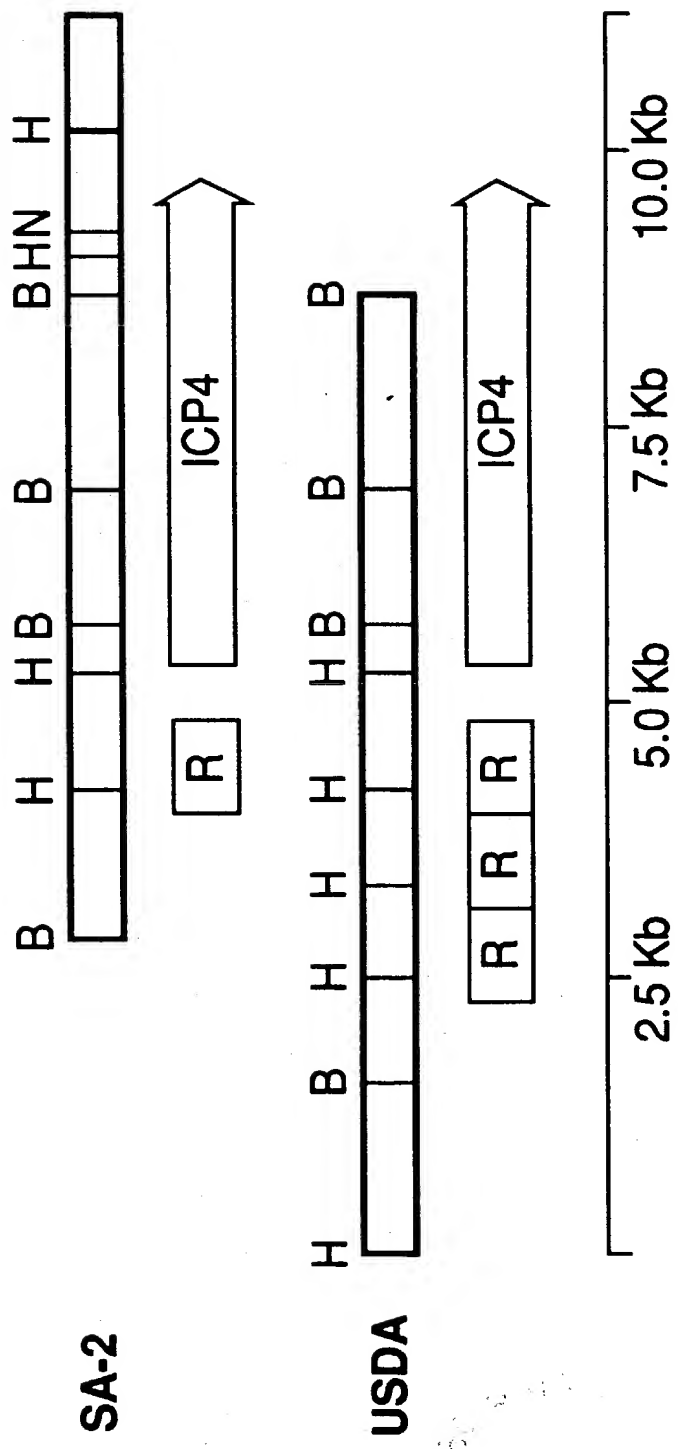
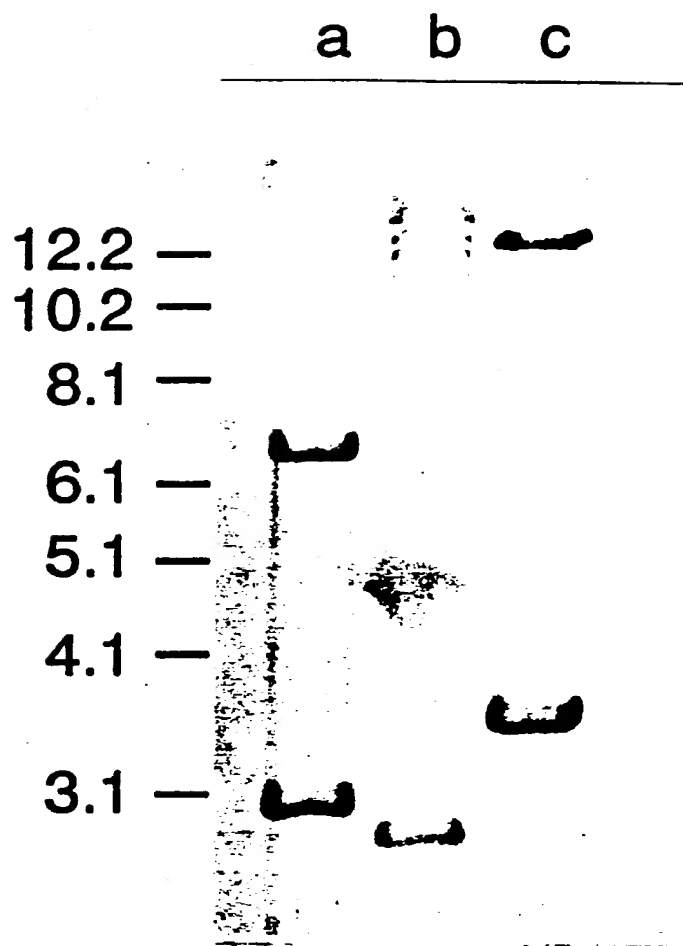


FIGURE 15



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FIGURE 16



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ILT 277 QHGPMAAVFRNAGAGLFLWPAMRAAFEERDKRLLRACLSLDIMDAAVLASF
      ||| |||||:: ::||: ||::|| :: : | . : ::||: |
HSV 351 QSGPDAAVFRSSLGSLLYWPGVRALLDRDCRVAARYAGRMTYLATGALLARF
      ..:||||: :|||:||||:| | :: |||. | :: ||||
EHV 531 LRTPNSAVFFRAFFGSLVYWAE LRLALRD PASINCRVVG FHLQTSEIYLLARA
      :|. | ::. | | :|||. |:| | | . . . | |. : : |||||: |
MDV 472 MRDPMASAA RAS YGSLAY WPELR CAL GSENKR I VR YA IVAMIQ AEIY LLTRI

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ILT 277 QHGPMAAVFRNAGAGLFLWPAMRAAFEERDKRLLRACLSSLDIMDAAVLASF
      ||| ||| ||| :: :: :: || :: :: :: || :: :: :: ||| :: :: :: |||
HSV 351 QSGPDAAVFRSSLGSLLYWPGVRAALLDRDCRVAARYAGRMTYLATGALLARF
      .. :: ||| :: ||| :: ||| :: ||| :: ||| :: ||| :: |||
EHV 531 LRTPNSAVFRAFFGSLVYWAELRLALRDPASINCRVVGFLQTSEIYLLARA
      :: || ::. || :: ||| :: ||| :: ||| :: ||| :: ||| :: ||| :: |||
MDV 472 MRDPMASAAARASYGSLAYWPELRCALGSENKRIVRVAIVAMLQAEIYLLTRI

```